NAD

SERVICE MANUAL

C 325BEE

STEREO AMPLIFIER

C 325BEE

STEREO AMPLIFIER

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DESCRIPTION	PAGE

PRODUCT SAFETY SERVICING GUIDELINES

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

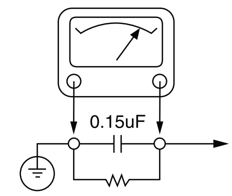
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM AC LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING AC CORD). AND REPLACE IF NECESSARY FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN AC LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFET TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN AC VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD, 150V AC TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME.
   MEASURE THE AC VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR.
   REVERSE THE AC PLUG AND REPEAT AC VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART.
   VOLTAGE MEASURE MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMP AC ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE. OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCAL MOUNTING KIT MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM, BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the A/V Receiver covered by this service data and its supplements and addends, read and follow the *SAFETY PRECAUTIONS. NOTE* : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.
Remember Safety First:

General Servicing Precautions

1. Always unplug the A/V Receiver AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this A/V Receiver or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.

5. Do not apply AC power to this A/V Receiver and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.
Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical Es devices are integrated circuits and some field effect transistors and semiconductor chip components.
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only an antistatic solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.

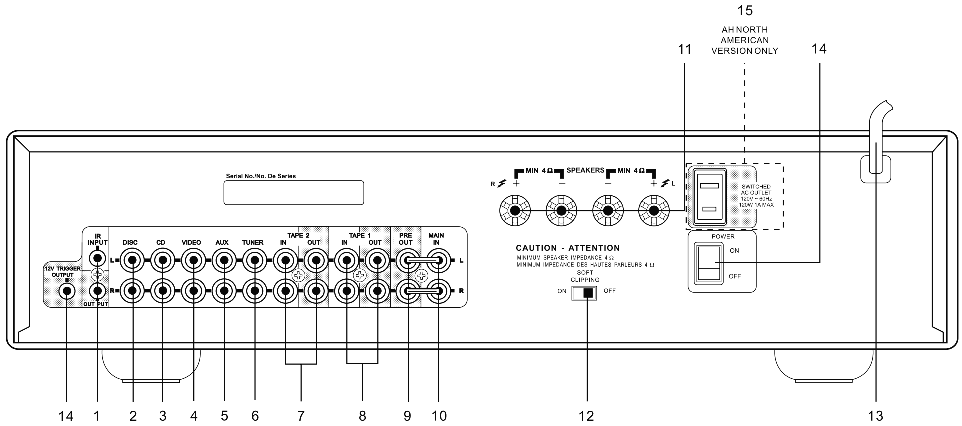
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

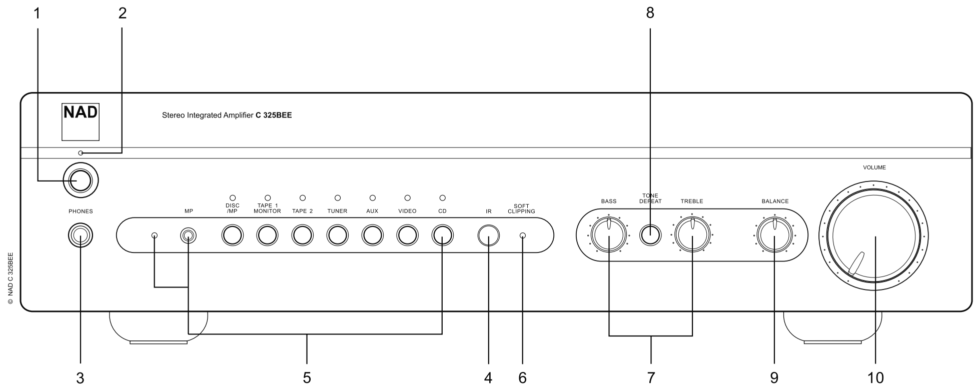
8. Minimize bodily motions when handing unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

REAR PANEL CONNECTIONS



1. IR INPUT/OUTPUT
2. DISC INPUT
3. CD INPUT
4. VIDEO INPUT
5. AUX INPUT
6. TUNER INPUT
7. TAPE 2 IN/OUT
8. TAPE 1 IN/OUT
9. PRE-OUT
10. MAIN IN
11. SPEAKER OUT
12. SOFT CLIPPING
13. AC LINE CORD
14. +12V TRIGGER OUT
15. SWITCHED AC OUTLET (ONLY FOR AH)

FRONT PANEL CONTROLS



1. POWER
2. POWER/STANDBY/PROTECTION LED
3. HEAPHONE
4. IR RECEIVER
5. INPUT SELECTOR
6. SOFT CLIPPING LED
7. TONE CONTROLS
8. TONE DEFEAT
9. BALANCE
10. VOLUME

SPECIFICATIONS

POWER AMPLIFIER SECTION
STEREO MODE

CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS OR 4 OHMS (Min. power per channel, 20 Hz – 20 kHz, with no more than rated distortion)	**50 W (17 dBW)**
Rated Distortion (THD 20 Hz – 20 kHz)	**0.03%**
Clipping power (maximum continuous power per channel 4 and 8).	**68 W**
IHF dynamic headroom: at 8 ohms	**+ 3.4 dB**
at 4 ohms	**+ 5.0 dB**
IHF dynamic power (maximum short term power per channel)	
8 ohms:	**110 W (20.4 dBW)**
4 ohms:	**160 W (22.0 dBW)**
2 ohms:	**210 W (23.2 dBW)**
Damping factor (ref. 8 ohms 1 kHz)	**> 100**
Input Impedance	**R = 20 kohms** **C = 1 nF**
Input sensitivity (for rated output into 8 ohms)	**630 mV**
Voltage gain	**29 dB**
Frequency response 20 Hz – 20 kHz	**± 0.2 dB**
Signal / Noise ratio, A-weighted	**100 dB ref. 1 W** **117 dB ref. 50 W**
THD + Noise (Total Harmonic Distortion, 20 Hz – 20 kHz, from 250 mW to rated output)	**< 0.03%**
SMPTE I.M. (Intermodulation Distortion, 60 Hz + 7 kHz, 4:1, from 250 mW to rated output)	**< 0.01%**
IHF I.M. (CCIF IM Distortion, 19 + 20 kHz at rated output)	**< 0.01%**
Headphones Output Impedance	**220 ohms**

PREAMPLIFIER SECTION

LINE LEVEL INPUTS

(Disk, CD, Video, Auxiliary, Tuner, Tape 1,Tape 2)

Input impedance (R and C)	**200 kohms + 320 pF**
Input sensitivity (ref. rated power)	**220 mV**
Maximum input signal	**6 V**
Signal / Noise ratio, A-weighted (from CD Input to Speakers Output, Volume Setting for 500mV in , 8ohms 1W out)	**93.0 dB ref. 1W**
Signal to noise ratio preamp out, IHF "A" weighted	**106 dB re 500mV**
Frequency response, 20 Hz – 20 kHz	**< +/-0.1 dB (tone defeat on)** **< +/-0.5 dB (tone defeat off)**
THD + Noise, SMPTE IM	**< 0.01% at 5 V out**

LINE LEVEL OUTPUTS

Pre-amp output impedance		**80 ohms**
Tape output impedance		**Source Z + 1kohms**
Maximum output level	pre-amp out :	**> 12 V**
	Tape-out :	**> 10 V**

CONTROLS

Treble	**+/- 5 dB at 10 kHz**
Bass	**+/- 8 dB at 100 Hz**

IR IN and OUT

Input Resistance	**> 10 kohms**
Input Voltage	**Min 5 V**
Output Resistance	**< 30 ohms**

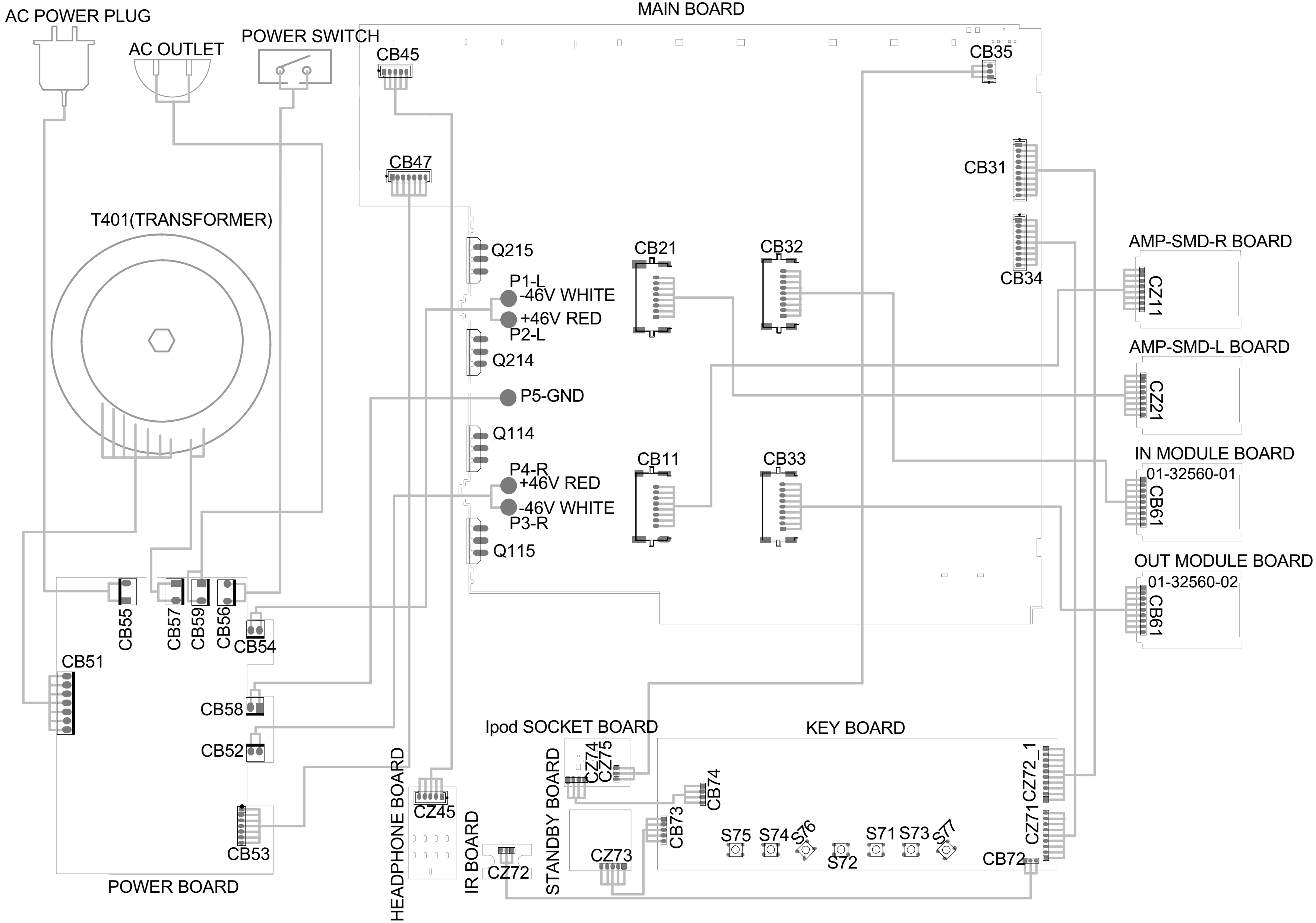
TRIGGER Out

Output Current	**50 mA**
Output Voltage	**12 V**

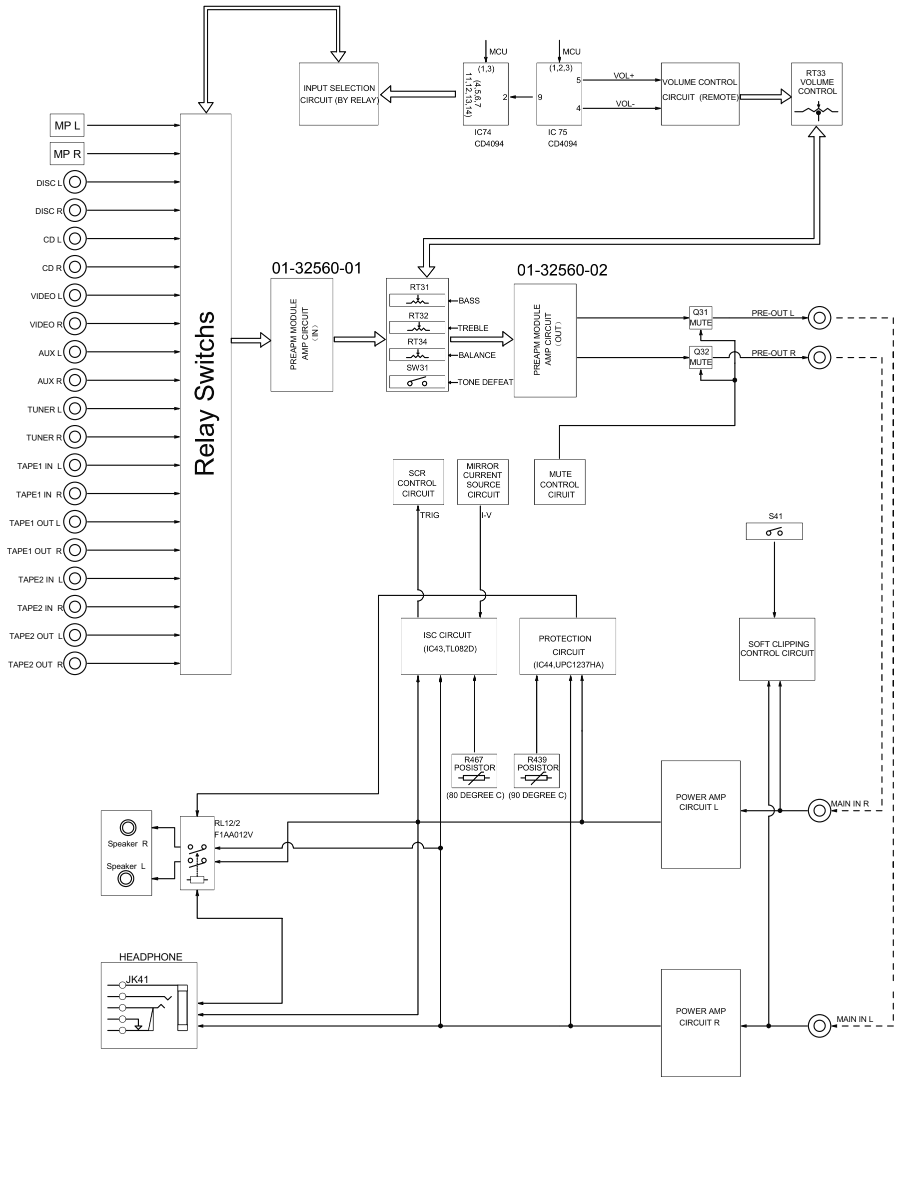
DIMENSIONS AND WEIGHTS

Net Weight	**6.5 kg (14.3 lb)**
Shipping Weight	**8 kg (17.6 lb)**
DIMENSION (W×H×D)	**435 × 100 × 290MM**

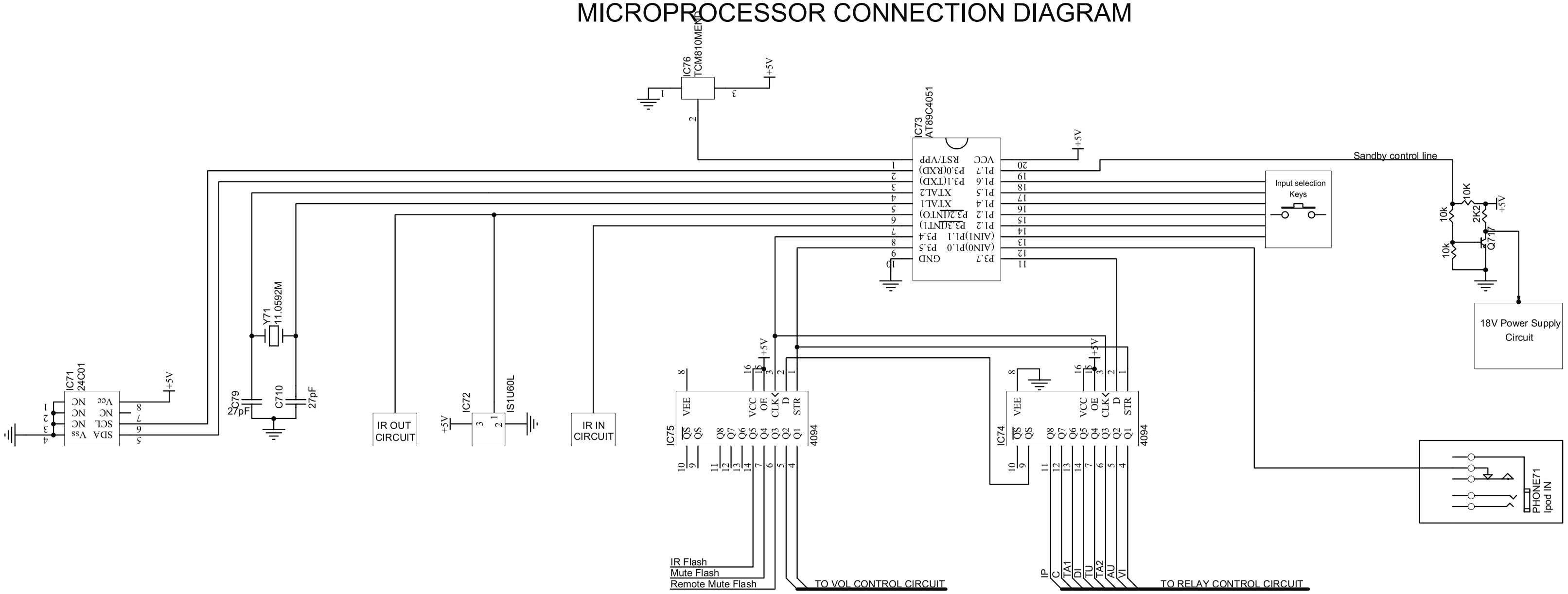
WIRING DIAGRAM



BLOCK DIAGRAM

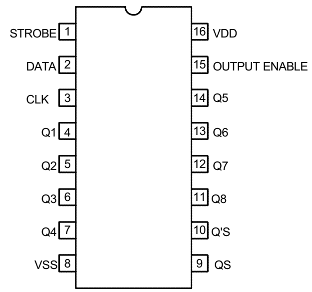


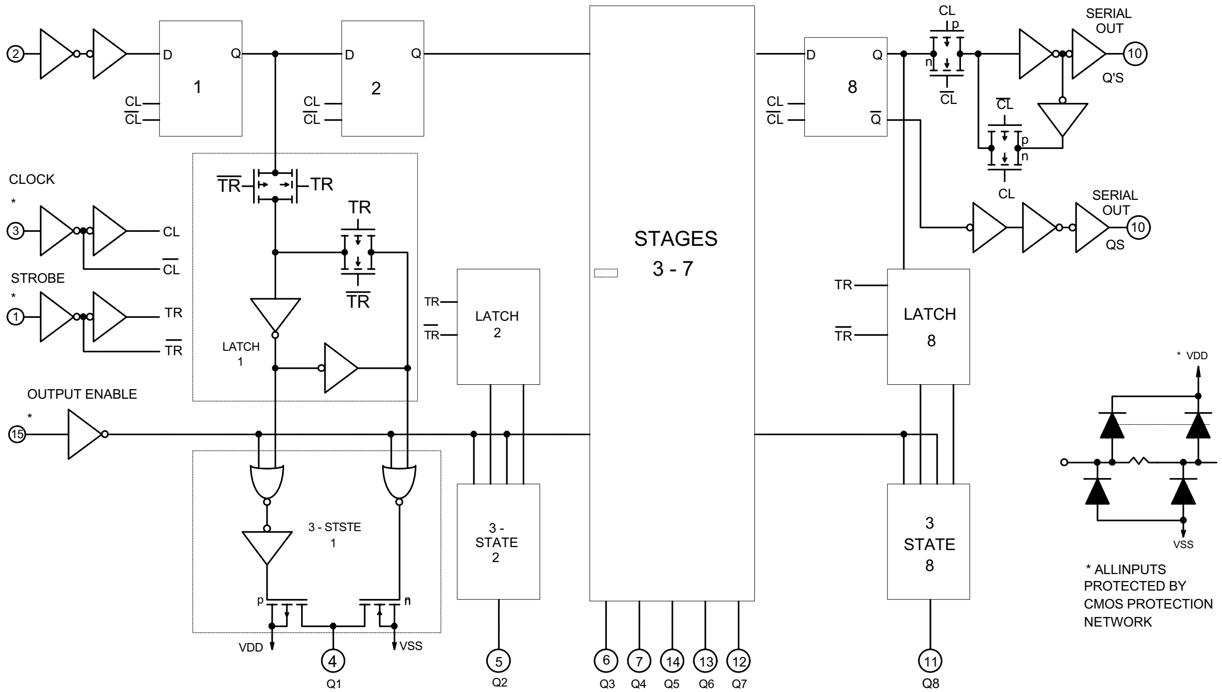
MICROPROCESSOR CONNECTION DIAGRAM



CD4094
KEY BOARD：IC74&IC75

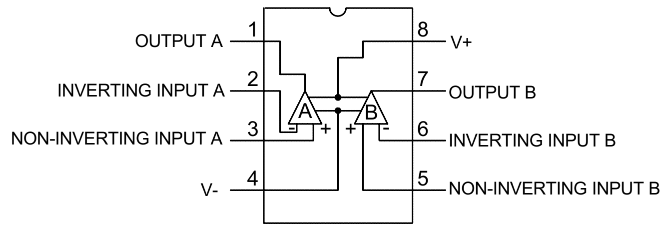
PIN CONFIGURATION





* ALLINPUTS PROTECTED BY CMOS PROTECTION NETWORK

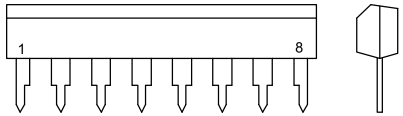
TL082D
MAIN BOARD：IC41&IC42&IC43



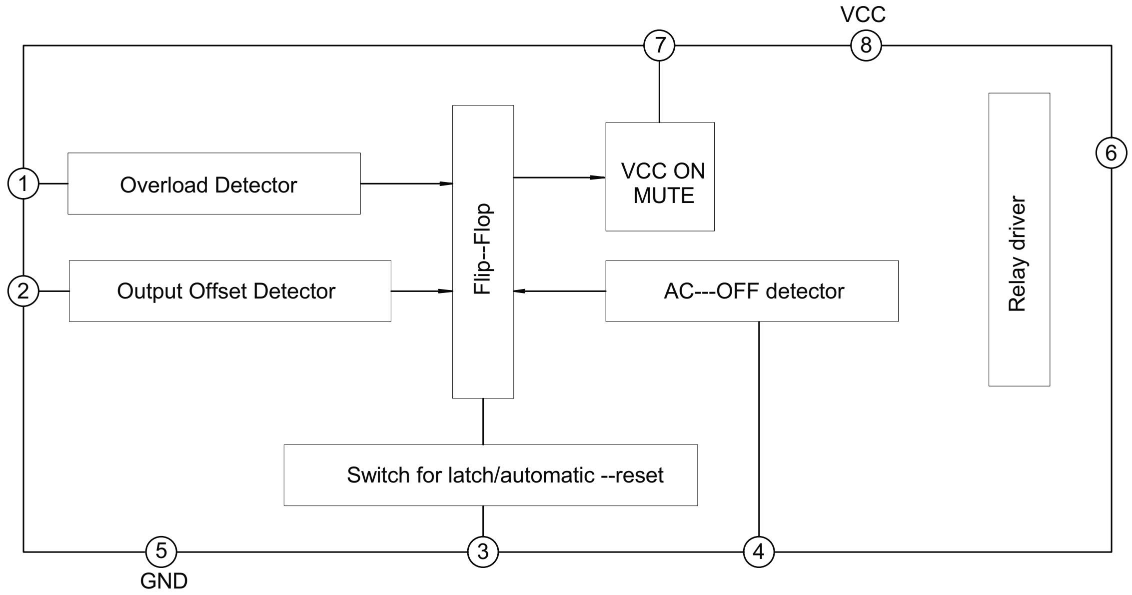
uPC1237HA

MAIN BOARD: IC44

8PIN PLASTIC SLIM SIP



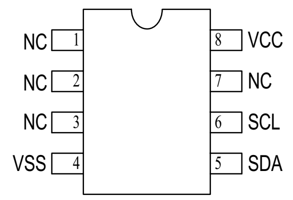
ICS BLOCK DIAGRAM



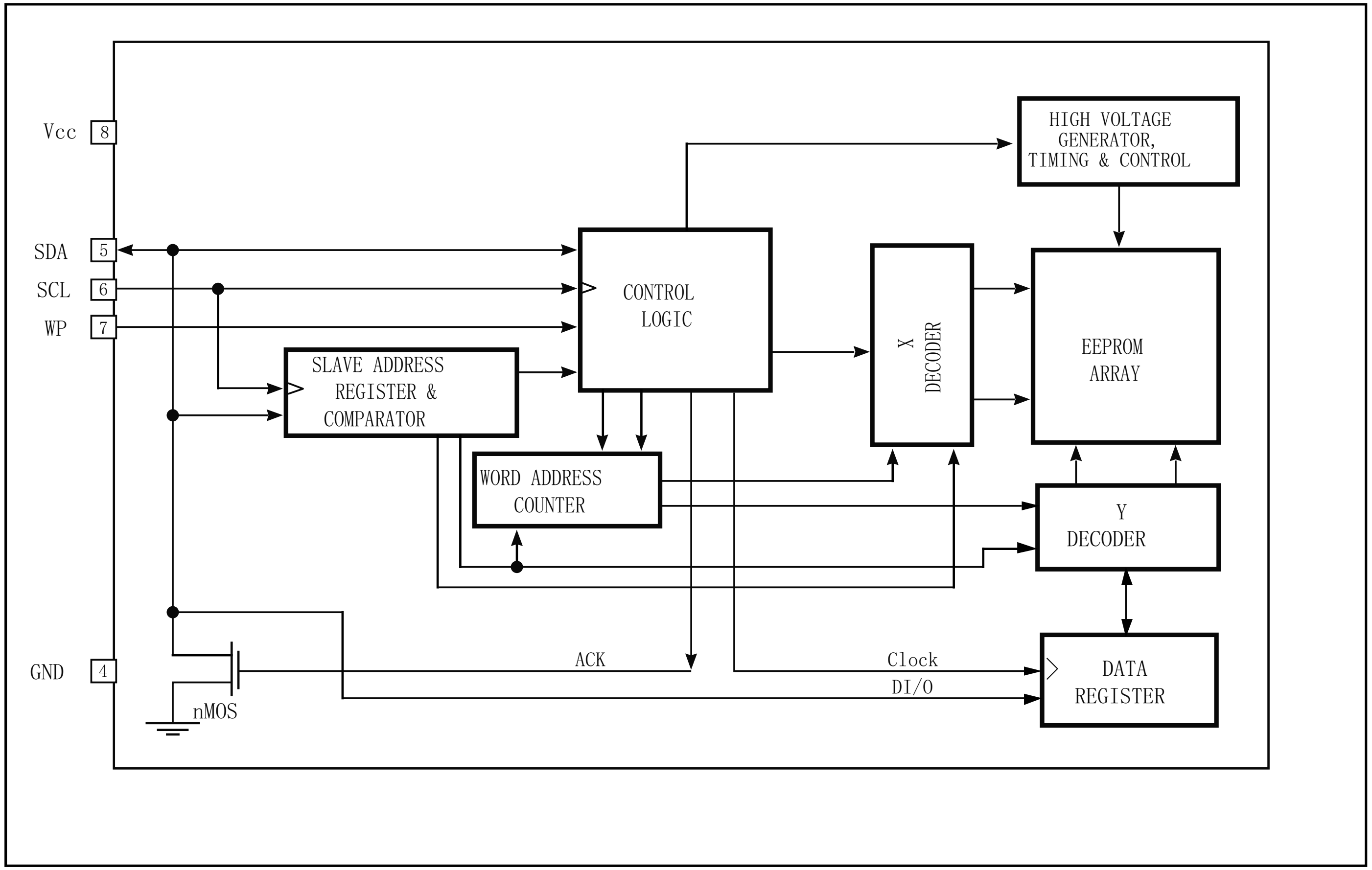
24C01

KEY BOARD：IC71

PIN CONFIGURATION



FUNCTIONAL BLOCK DIAGRAM

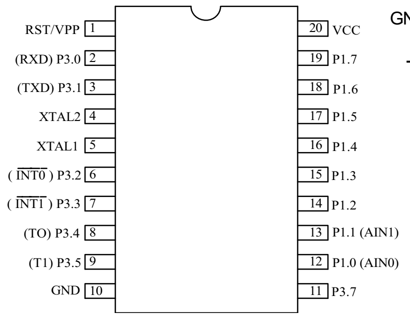


AT89C4051

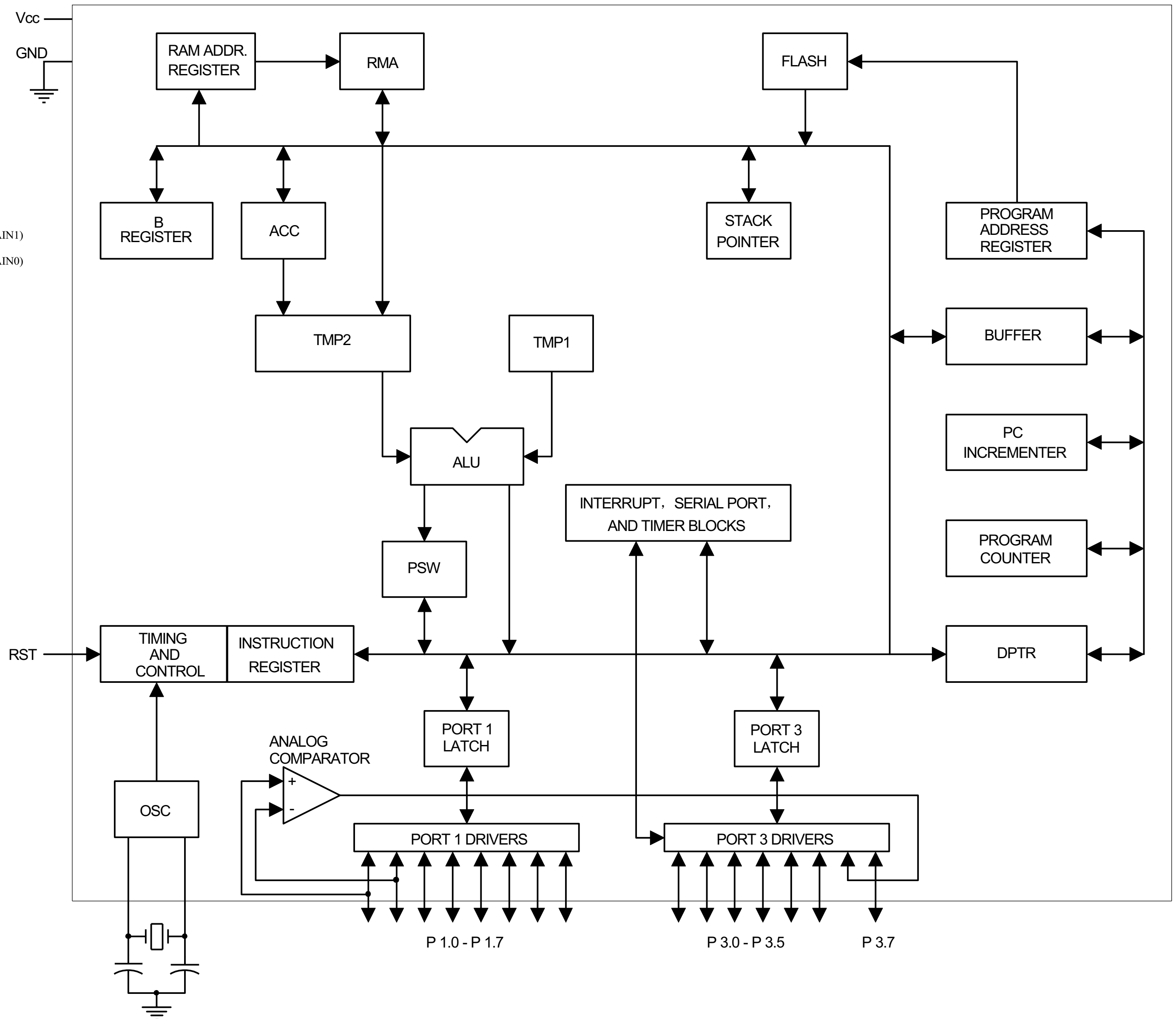
KEY BOARD：IC73

Pin Configuration

PDIP/SOIC



Block Diagram



ALIGNMENT PROCEDURES

I. INITIAL

A. LOWEST VOLUME ADJUSTMENT

1. Tune the volume pot to lowest state.
2. Input a high voltage signal such as 5V from CD input.
3. Connect a oscilloscope to L channel binding posts.
4. Observing the oscilloscope,adjust VR301,make the output of speakers become to the lowest level.
5. Adjusting VR302,make R channel output become to the lowest level by same way.

B. IDLING CURRENT

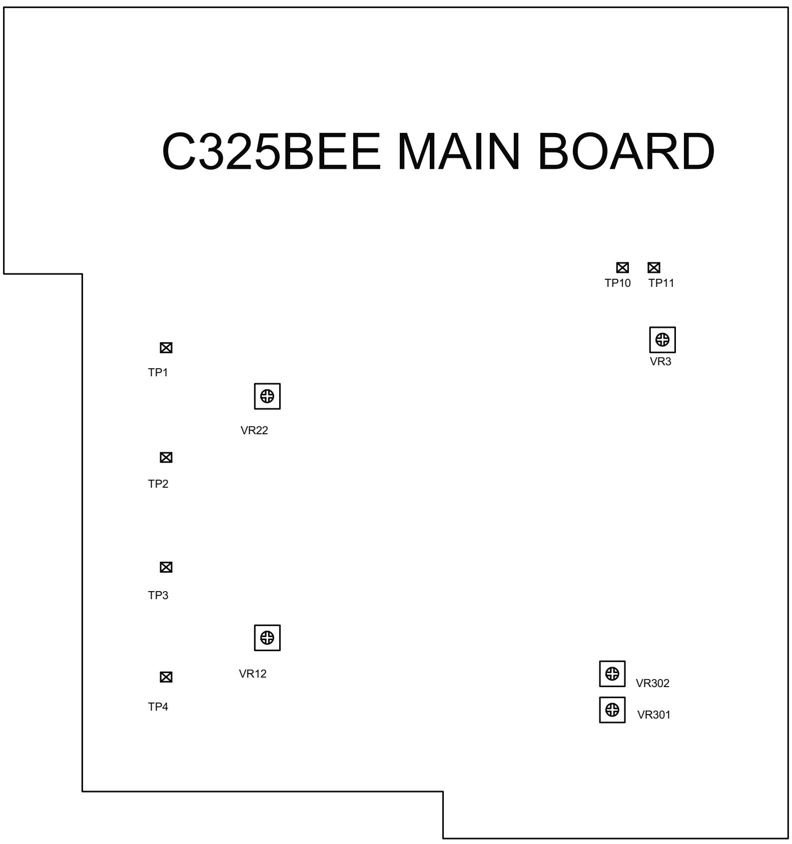
1. Level power on for a minimum of 5 minutes
2. Connect a DC voltmeter toTP1 and TP2 ,adjust VR22 for 4mV reading on voltmeter.
3. Connect a DC voltmeter toTP3 and TP4 ,adjust VR12 for 4mV reading on voltmeter.

C.ISC CIRCUIT ORIGINAL ADJUSTING

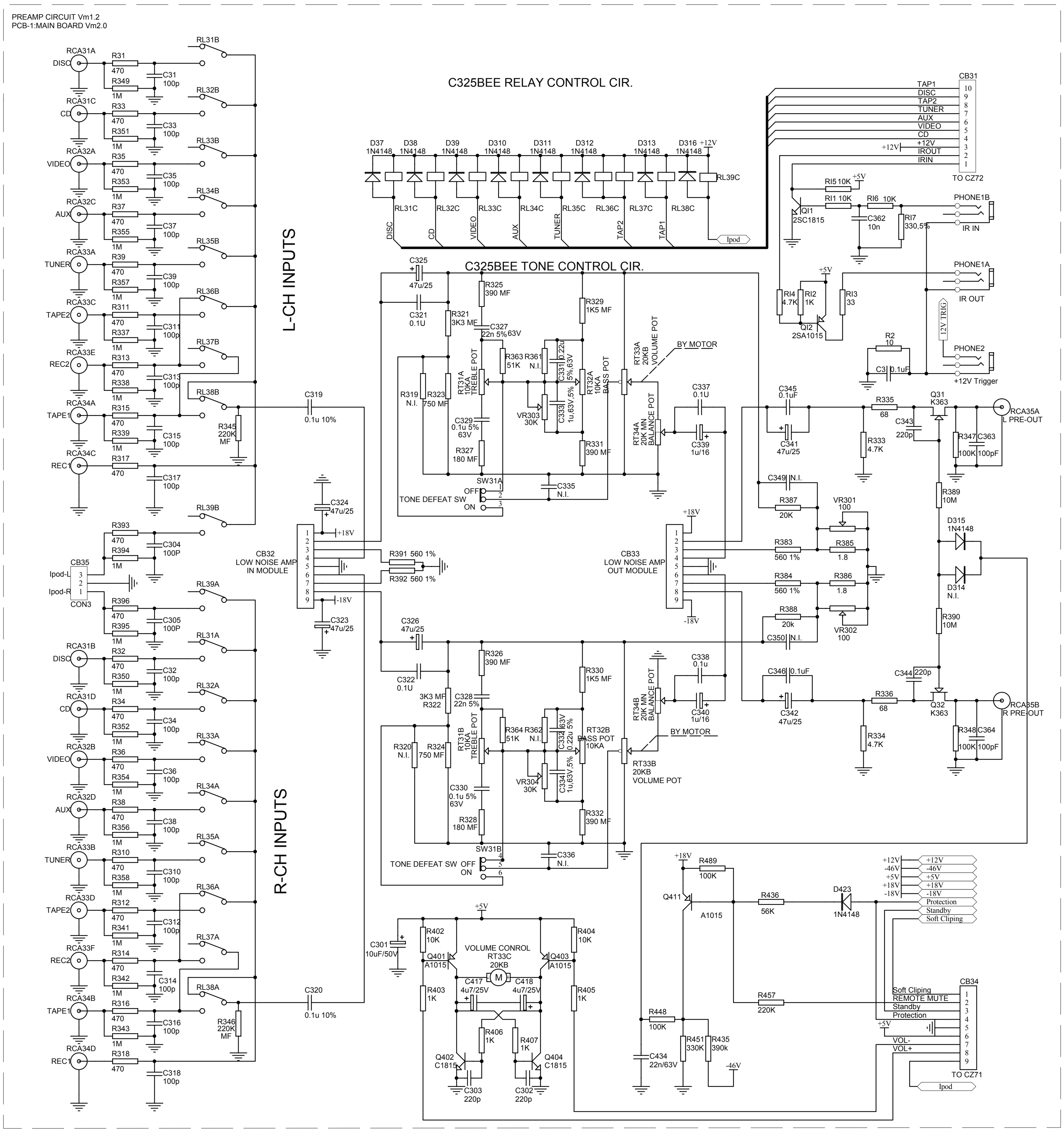
Adjust the pot VR3 to make the DC voltage of the point of TP10 to the same as TP11

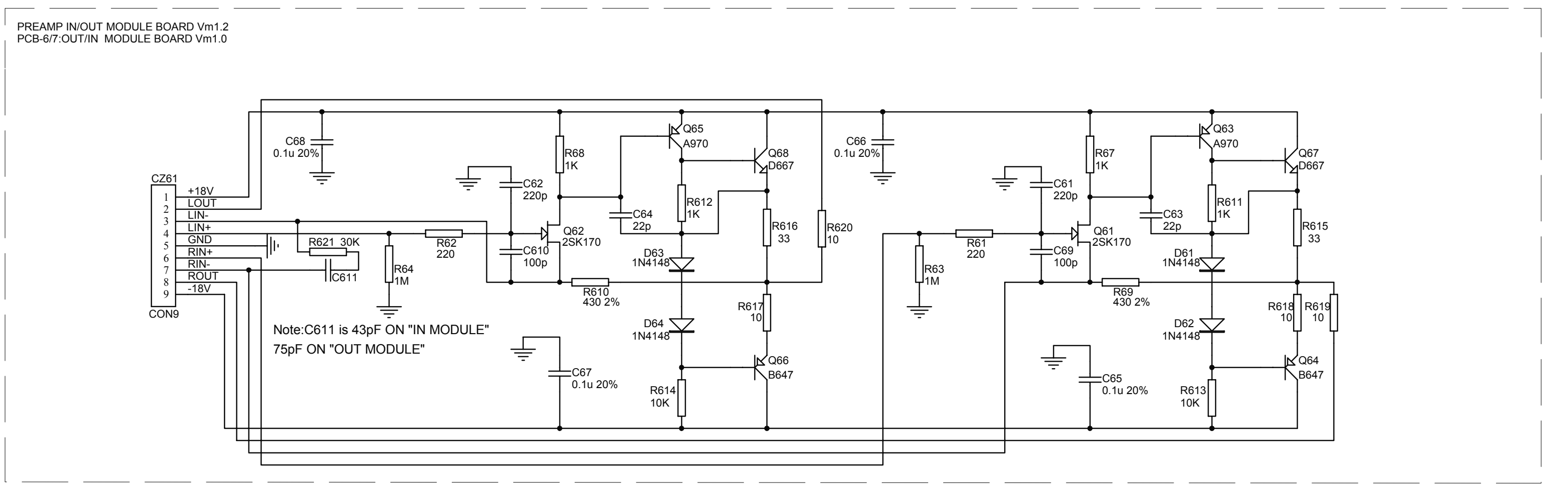
II. FINAL ADJUSTMENT

Repeat procedure A,B and C for the lowest volume level, idling current alignment and ISC original level respectively.

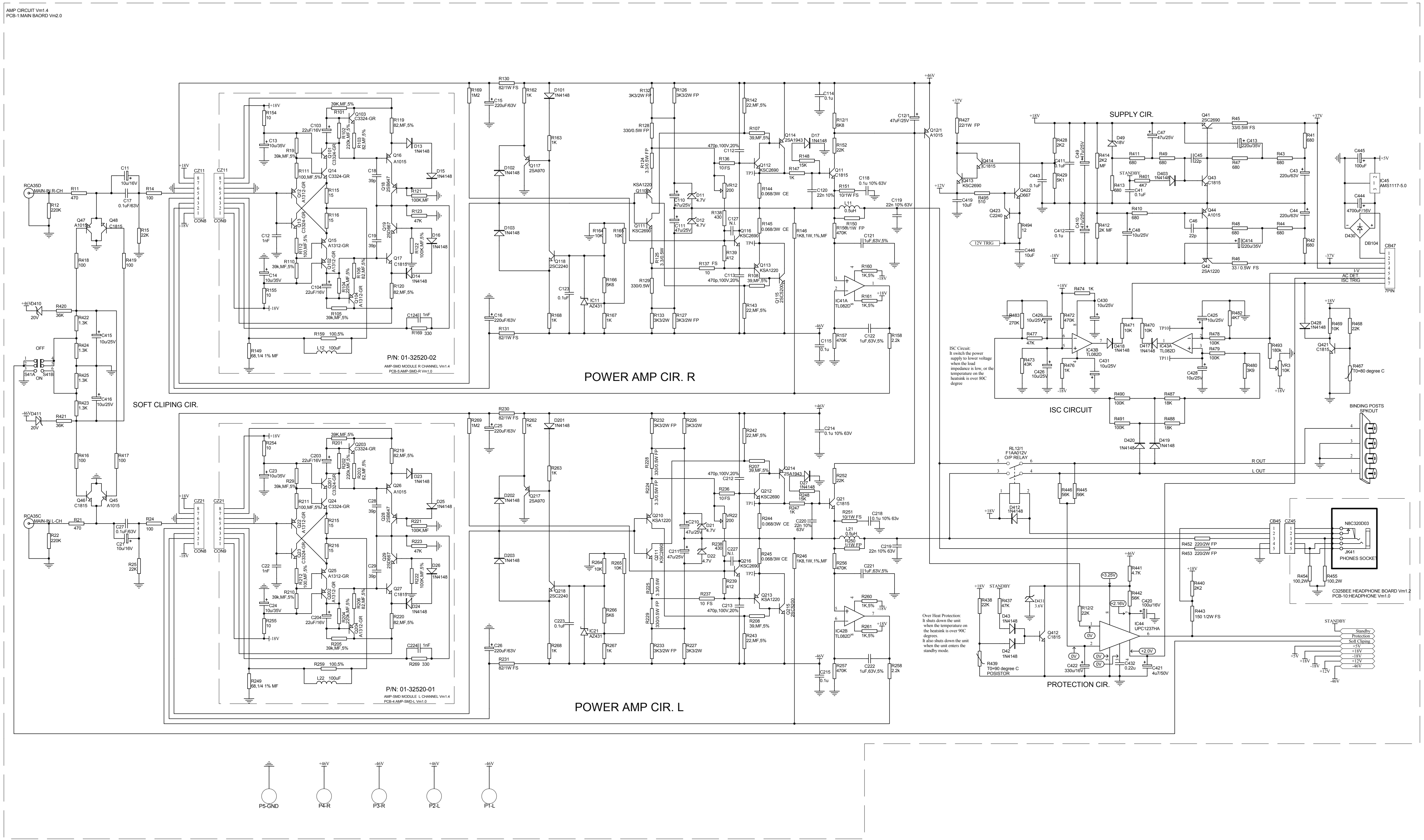


SCHEMATICS DIAGRAM

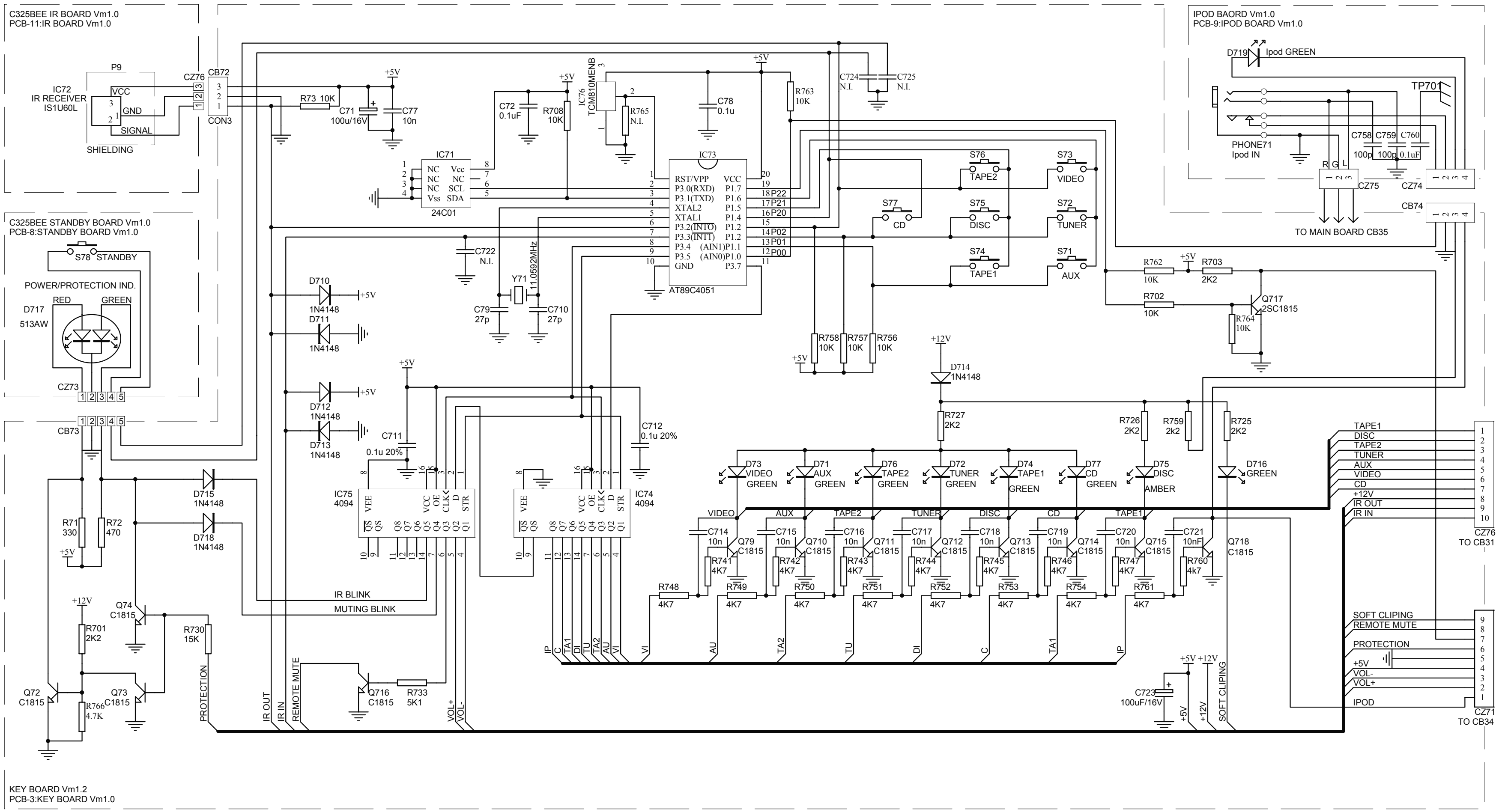




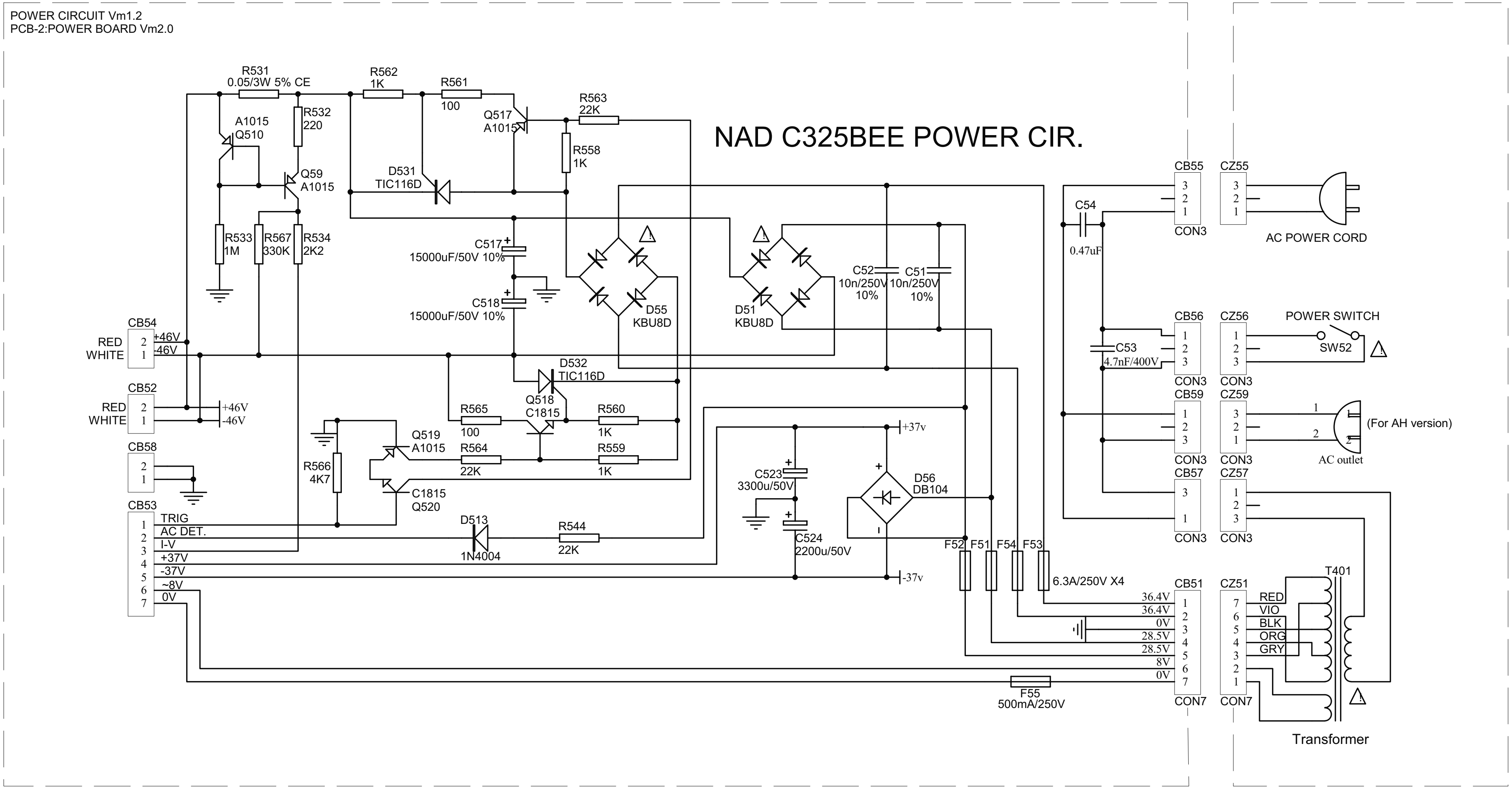
SCHEMATICS DIAGRAM(1/4)



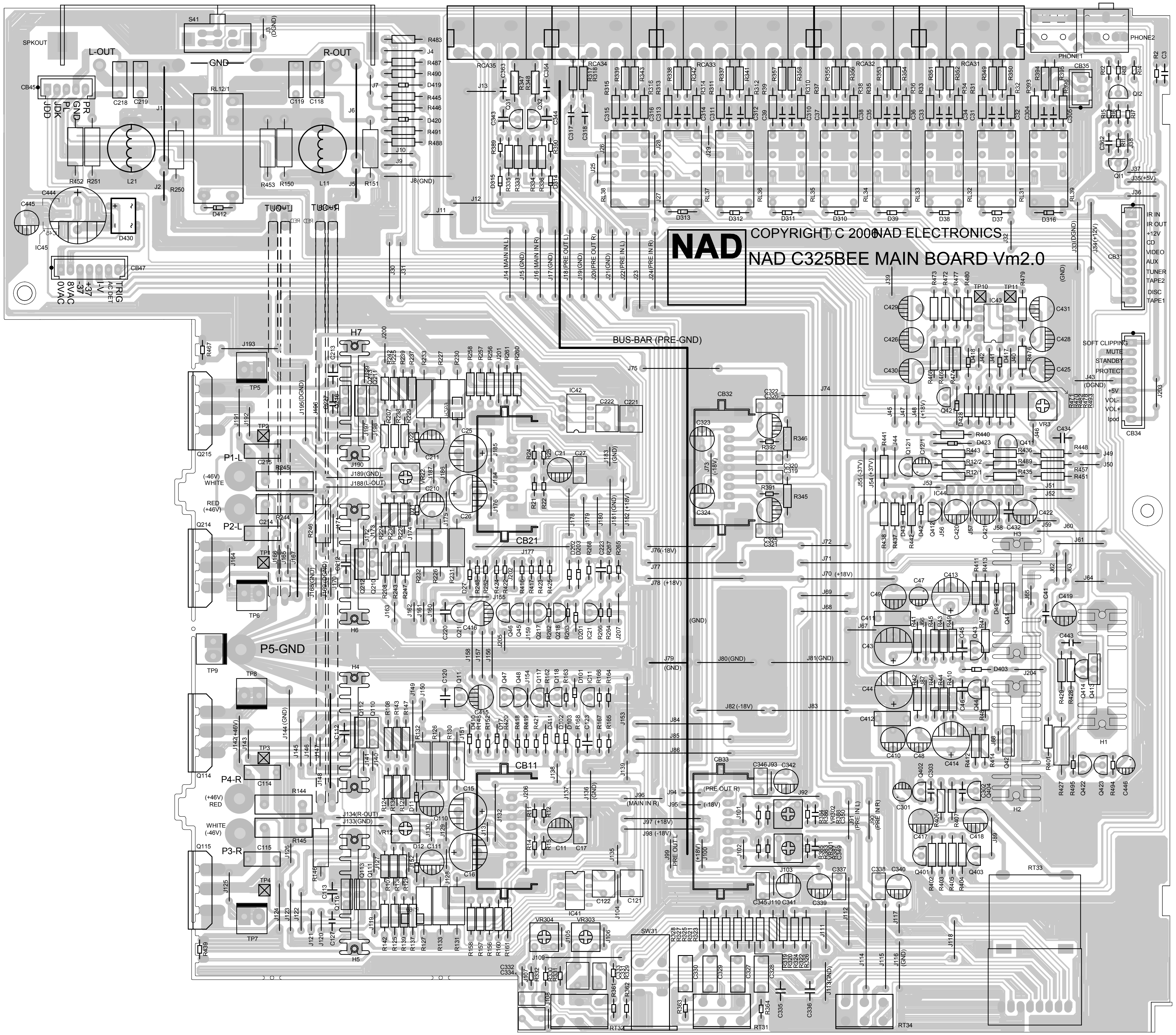
SCHEMATICS DIAGRAM(4/4)



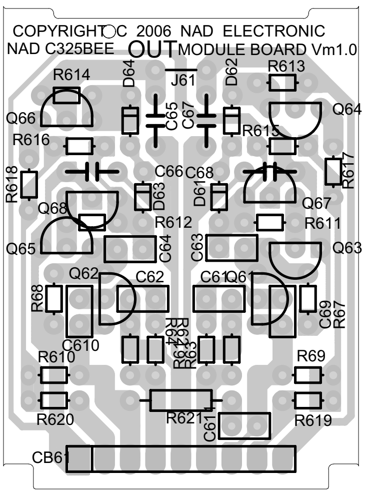
SCHEMATICS DIAGRAM (3/4)



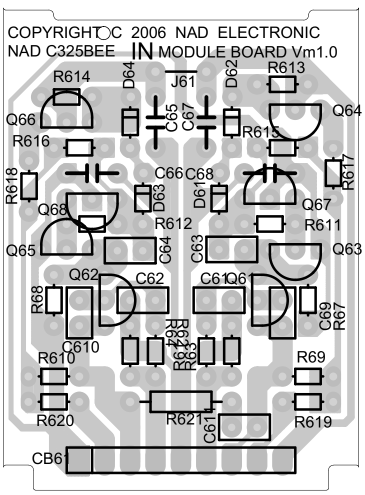
PCB-1: MAIN BOARD Vm2.0



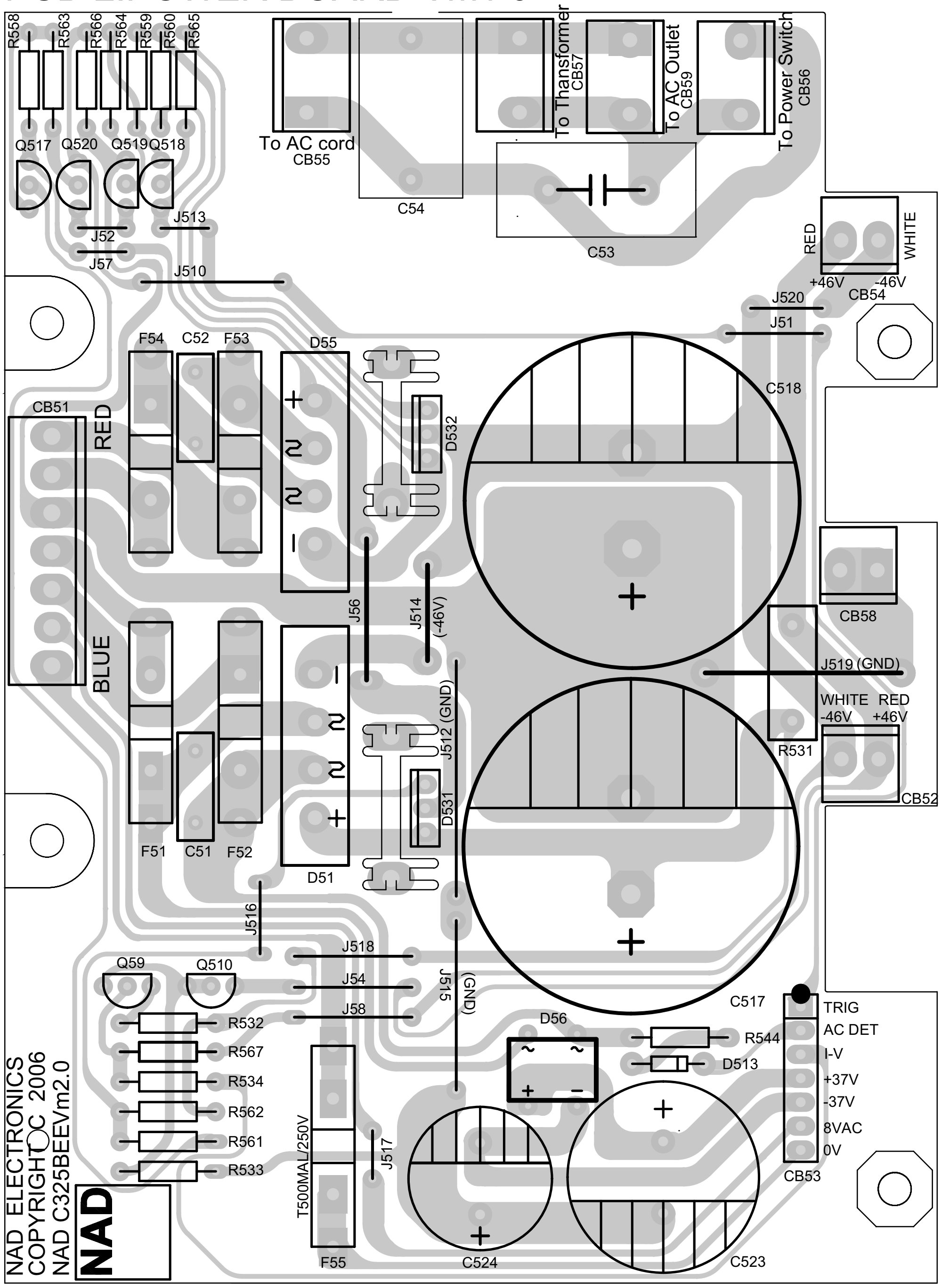
PCB-7:IN MODULE Vm1.0



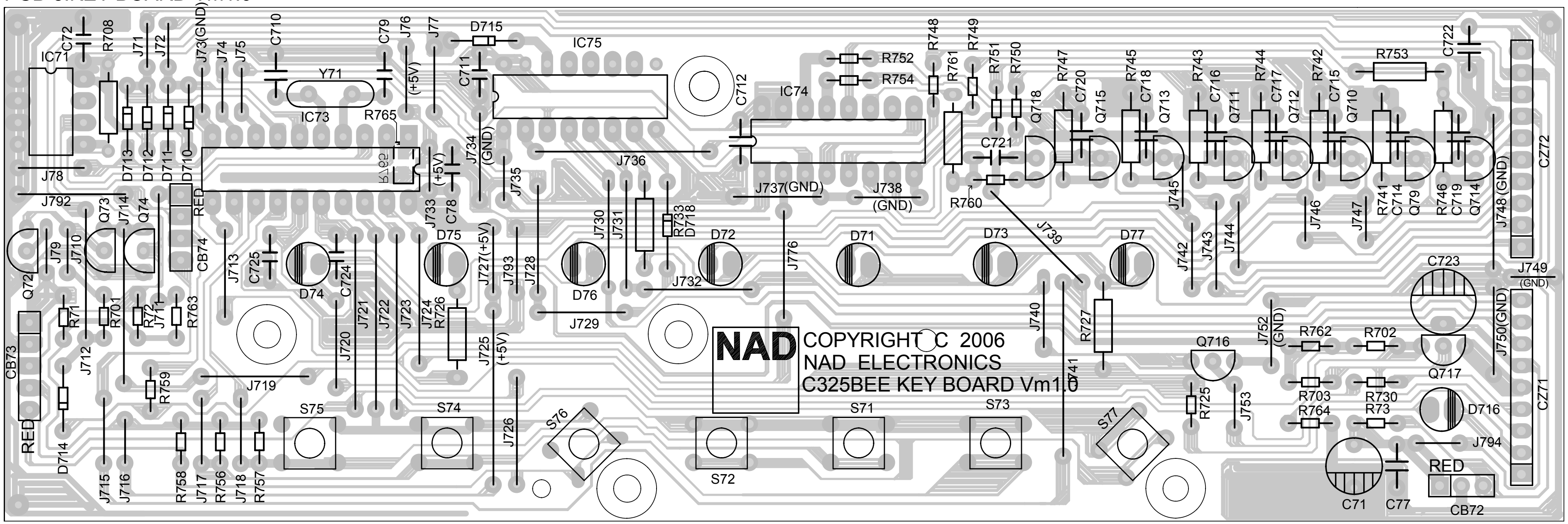
PCB-6:OUT MODULE Vm1.0



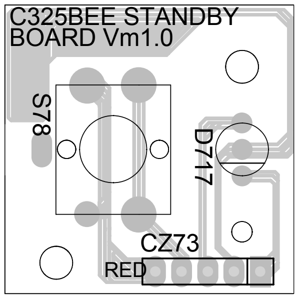
PCB-2:POWER BOARD Vm1.0



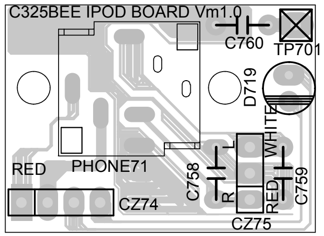
PCB-3:KEY BOARD Vm1.0



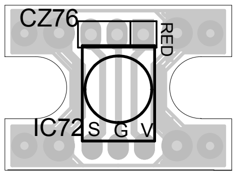
PCB-8:STANDBY BOARD Vm1.0



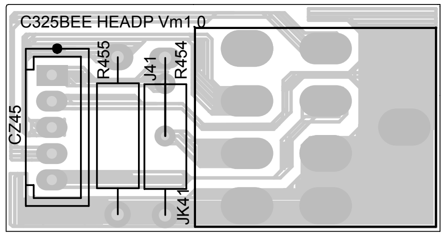
PCB-9:IPOD BOARD Vm1.0



PCB-11:IR BOARD Vm1.0

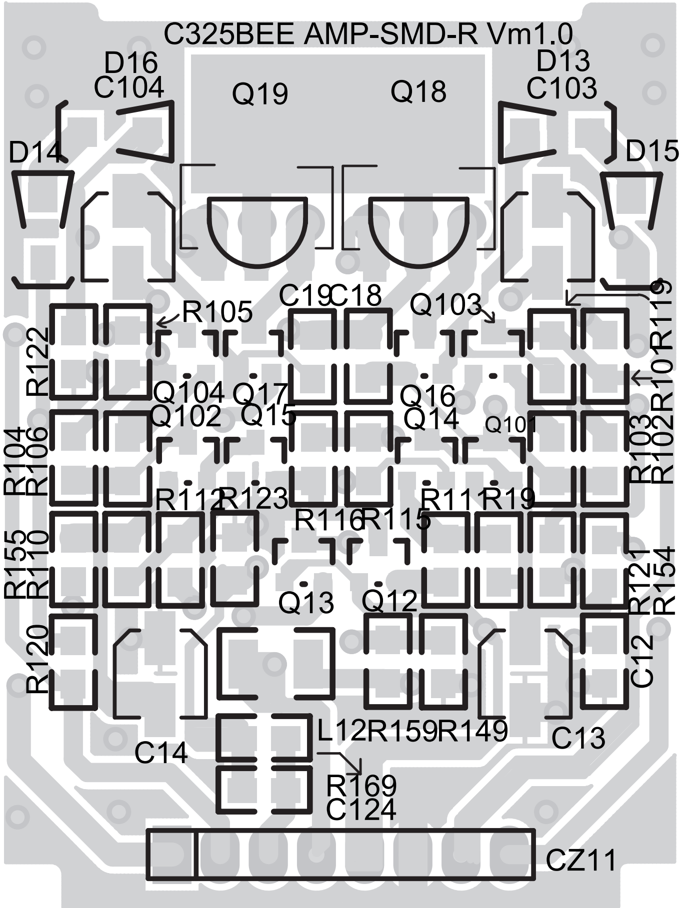


PCB-10:HEADPHONE BOARD Vm1.0

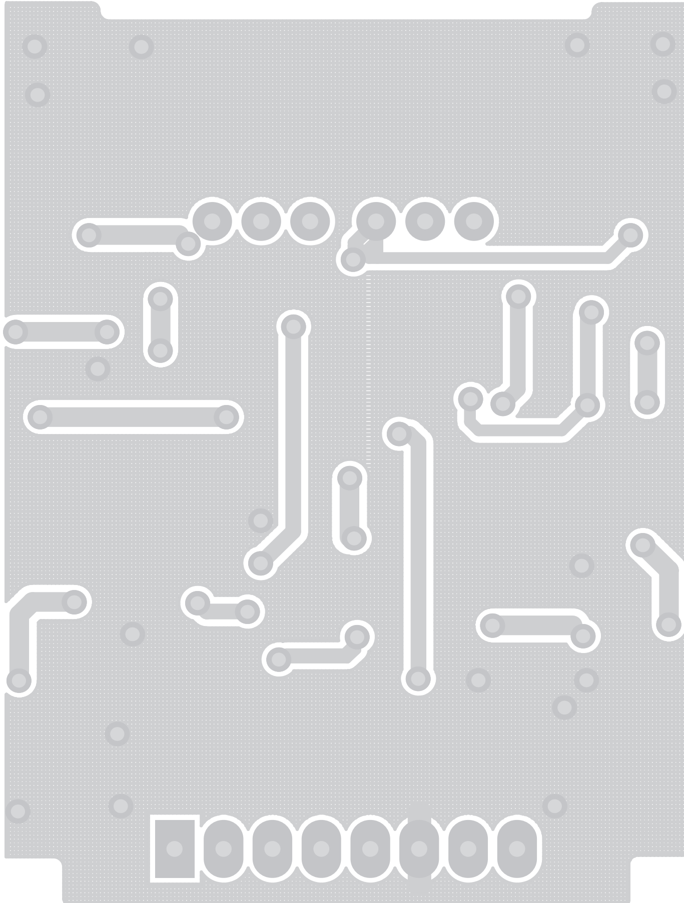


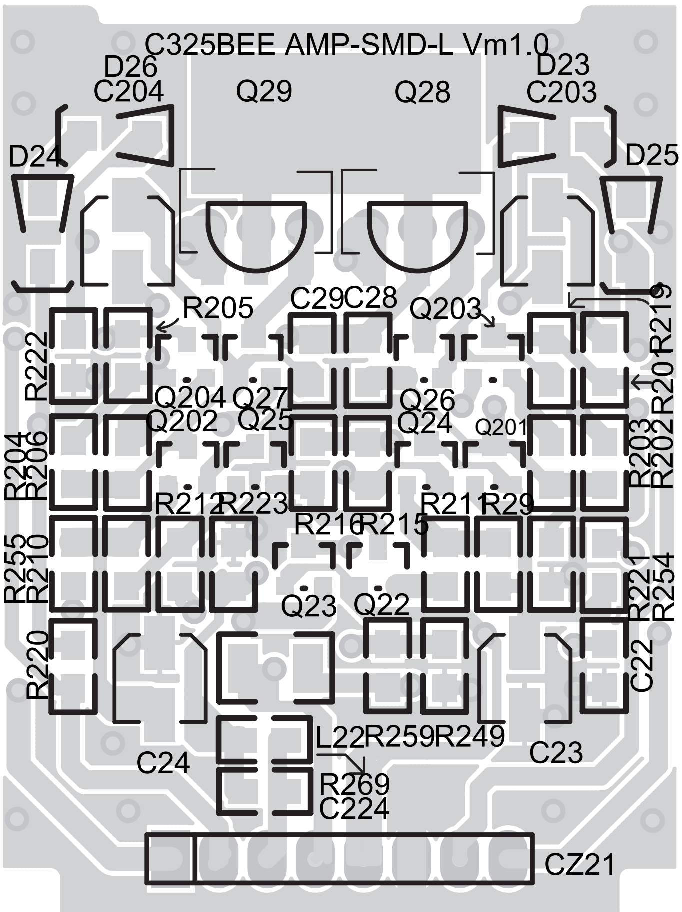
PCB-5:AMP-SMD-R BOARD Vm1.0 P/N: 01-32520-02

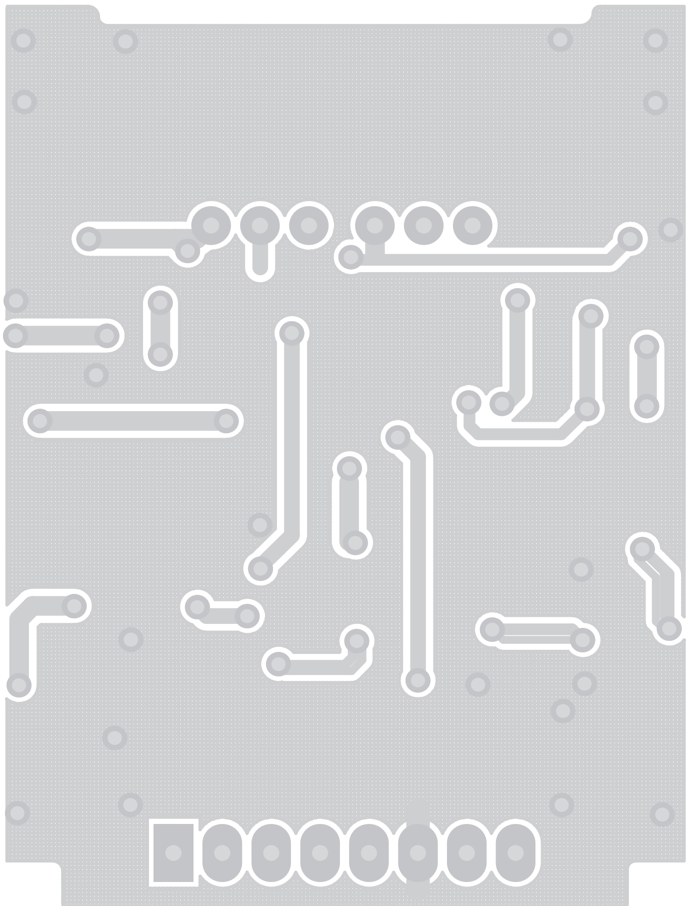
(TOP VIEW)



(BOTTOM VIEW)





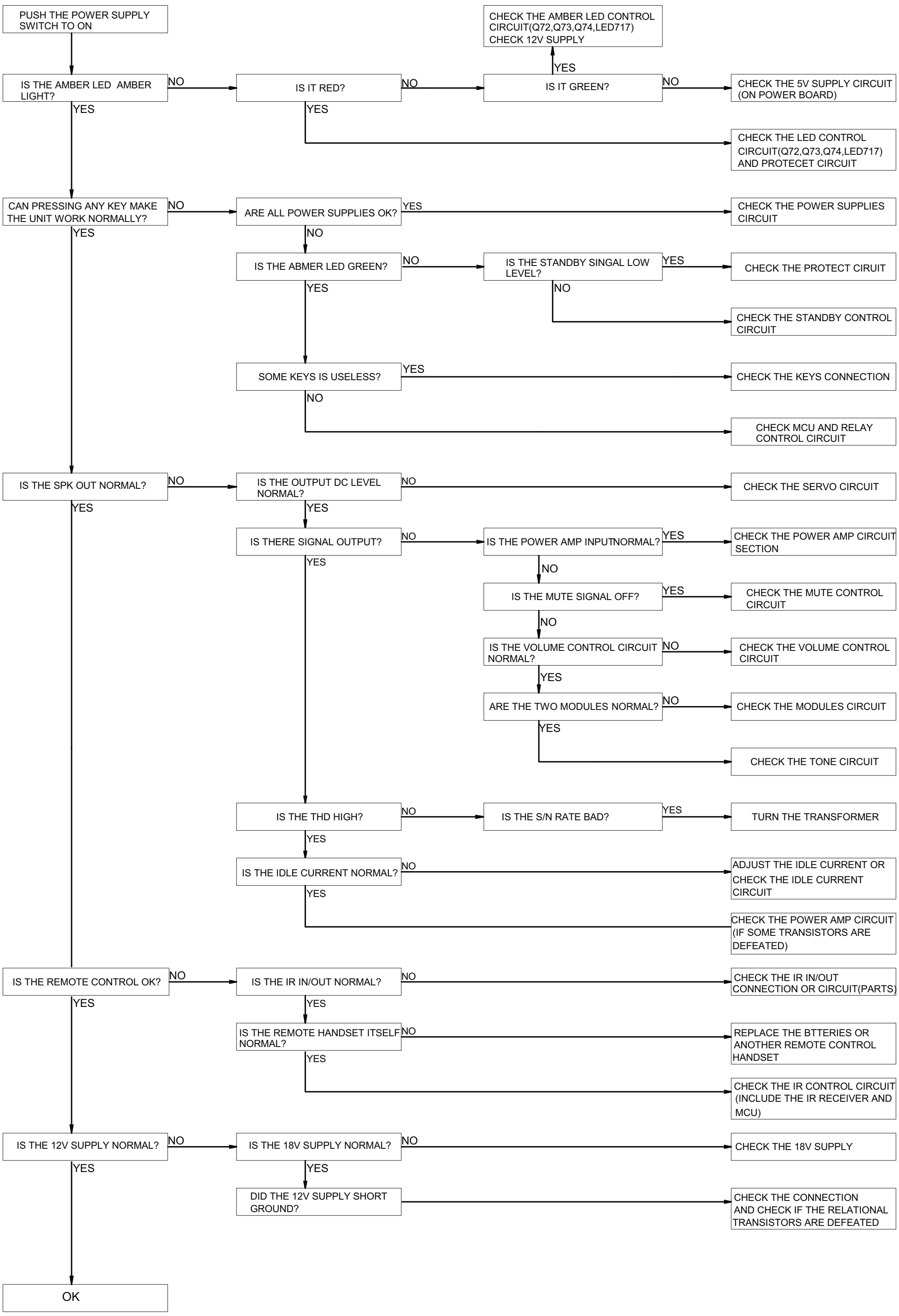


PCB-4:AMP-SMD-L BOARD Vm1.0 P/N: 01-32520-01

(TOP VIEW)

(BOTTOM VIEW)

TROUBLESHOOTING GUIDE



ELECTRIAL PARTS LIST

PCB-1: MAIN BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	ICS	
IC41, IC42, IC43	03-00082-00	TL082CP/CN/D
IC44	03-01237-00	UPC1237HA
IC45	03-01117-01	AMS1117-5.0/ LM1117MPX-5.0
IC11, IC21	03-00431-03	AZ431BZ-B
	DIODES	
D430		DB104
D17, D27, D101, D102, D103, D201, D202, D203, D37, D38, D39, D310, D311, D312, D313, D315, D316, D42, D43, D403, D412, D417, D418		1N4148 (Pitch=7.5mm)
D419, D420, D423, D428		1N4148 (Pitch=10mm)
D11, D12, D21, D22		4.7V, 0.5W
D410, D411		20V, 0.5W
D49		18V, 0.5W
	TRANSISTORS	
Q31, Q32	31-00363-00	2SK363
Q31, Q32	or 31-00369-00	2SK369
Q31, Q32	or 31-00170-00	2SK170
QI2, Q12/1, Q44, Q45, Q47, Q401, Q403, Q411	31-01015-00	2SA1015 GR
QI1, Q11, Q21, Q43, Q46, Q48, Q402, Q404, Q412, Q414, Q421	31-01815-00	2SC1815
Q117, Q217	31-00970-00	2SA970 GR
Q423, Q118, Q218	31-02240-00	2SC2240
Q422	31-00667-00	2SD667A
Q413, Q41, Q216, Q211, Q212, Q112, Q116, Q111	31-02690-00	KSC2690AYSTU
Q42, Q213, Q210, Q110, Q113	31-01220-00	KSA1220AYSTU
	CAPACITORS	
C45, C46	05-22012-00	22p, 100V, ±10%
C31, C32, C33, C34, C35, C36, C37, C38, C39, C304, C305, C310, C311, C312, C313, C314, C315, C316, C317, C318, C363, C364	05-10151-01	100p, 50V, ±10%
C343, C344, C302, C303	05-22151-01	220p, 50V, ±10%
C112, C113, C212, C213	05-47112-00	470p, 100V, ±10%
C362	05-10312-00	10n, 100V, +50%-20%
C120, C220, C434	24-22312-04	22n, 100V, ±10%
C123, C223, C3, C41, C443	24-10461-00	0.1uF, 63V, ±20%
C432	24-22461-00	0.22uF, 63V, ±20%

C327, C328, C119, C219	25-22361-01	22n, 63V, ±5%
C329, C330	25-10461-05	0.1uF, 63V, ±5%
C114, C115, C118, C214, C215, C218, C411, C412	25-10461-01	0.1uF, 63V, ±10%
C17, C27, C322, C321, C345, C346, C337, C338, C319, C320	25-10461-06	0.1uF, 63V, ±10%
C331, C332	25-22461-02	0.22uF, 63V, ±5%
C121, C122, C221, C222, C333, C334	25-10561-02	1u, 63V ±5%
C339, C340	06-10951-08	1uF, 50V, ±20%
C421, C417, C418	06-47951-00	4.7uF, 50V, ±20%
C301, C48, C415, C416, C419, C425, C426, C428, C429, C430, C431, C446	06-10051-00	10uF, 50V, ±20%
C11, C21	06-10051-08	10uF, 50V, ±20%
C12/1, C110, C111, C210, C211, C323, C324, C47, C49, C410	06-47021-00	47uF, 25V, ±20%
C12/1, C110, C111, C210, C211, C323, C324, C47, C49, C410	06-47021-08	47uF, 25V, ±20%
C325, C326, C341, C342	06-47021-06	47uF, 25V, ±20%
C325, C326, C341, C342	06-47021-09	47uF, 25V, ±20%
C420, C445	06-10111-00	100uF, 16V, ±20%
C125, C126, C225, C226		100uF, 63V, ±20%(N.I)
C413, C414	06-22131-00	220uF, 35V, ±20%
C15, C16, C25, C26, C43, C44	06-22161-00	220uF, 63V, ±20%
C422	06-33111-01	330uF, 16V, ±20%
C444	06-47211-00	4700u, 16V, ±20%
	RESISTORS	
R169, R269	07-91204-02	1M2Ω, ±1%
R385, R386	07-10189-50	1R8, 1/6W, ±5%
R2	07-10100-50	10R, 1/6W, ±5%
R494	07-10120-50	12R, 1/6W, ±5%
R142, R143, R242, R243,	07-10220-51	22R, 1/4W, ±5%
RI3	07-10330-50	33R, 1/6W, ±5%
R107, R108, R207, R208	07-10390-51	39R, 1/4W, ±5%
R335, R336	07-10680-51	68R, 1/4W, ±5%
R14, R24, R416, R417, R418, R419	07-10101-50	100R, 1/6W, ±5%
RI7	07-10331-50	330R, 1/6W, ±5%
R138, R238	07-10431-51	430R, 1/4W, ±5%
R11, R21	07-10471-50	470R, 1/6W, ±5%
R31, R32, R33, R34, R35, R36, R37, R38, R39, R310, R311, R312, R313, R314, R315, R316, R317, R318, R393, R396	07-10471-51	470R, 1/4W, ±5%
R495	07-10511-50	510R, 1/6W, ±5%
R41, R42, R43, R44, R47, R48, R49, R410, R411, R413,	07-10681-51	680R, 1/4W, ±5%
RI2, R162, R163, R167, R168, R262, R263, R267, R268	07-10102-50	1K, 1/6W, ±5%
R147, R160, R161, R247, R260, R261, R403, R406, R405, R407, R474, R476	07-10102-51	1K, 1/4W, ±5%

R422, R423, R424, R425	07-10132-50	1K3, 1/6W, ±5%
R428, R440, R158, R258	07-10222-51	2K2, 1/4W, ±5%
R480	07-10392-51	3K9, 1/4W, ±5%
R401, R482, , R333, R334,	07-10472-51	4K7, 1/4W, ±5%
RI4	07-10472-50	4K7, 1/6W, ±5%
R429	07-10512-51	5K1, 1/4W, ±5%
R166, R266	07-10562-50	5K6, 1/6W, ±5%
R12/1	07-10682-51	6K8, 1/4W, ±5%
RI1, RI5, RI6, R164, R264, R165, R265	07-10103-50	10K, 1/6W, ±5%
R470, R471, R469, R402, R404	07-10103-51	10K, 1/4W, ±5%
R148, R248	07-10153-50	15K, 1/6W, ±5%
R441	07-10153-51	15K, 1/4W, ±5%
R487, R488	07-10183-51	18K, 1/4W, ±5%
R387, R388	07-10203-50	20K, 1/6W, ±5%
R15, R25, R152, R252	07-10223-50	22K, 1/6W, ±5%
R12/2, R468	07-10223-51	22K, 1/4W, ±5%
R420, R421	07-10363-50	36K, 1/6W, ±5%
R473	07-10433-51	43K, 1/4W, ±5%
R477, R437	07-10473-51	47K, 1/4W, ±5%
R436, R442, R445, R446	07-10563-51	56K, 1/4W, ±5%
R347, R348, R448, R478, R479, R489, R490, R491	07-10104-51	100K, 1/4W, ±5%
R438, R493	07-10184-51	180K, 1/4W, ±5%
R12,R22	07-10224-50	220K, 1/6W, ±5%
R457, R345, R346	07-10224-51	220K, 1/4W, ±5%
R483	07-10274-51	270K, 1/4W, ±5%
R451	07-10334-51	330K, 1/4W, ±5%
R435	07-10394-51	390K, 1/4W, ±5%
R472, R156, R157, R256, R257	07-10474-51	470K, 1/4W, ±5%
R337, R338, R339, R341, R342, R343, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R394, R395	07-10105-51	1M, 1/4W, ±5%
R327, R328	07-20181-51	180R, 1/4W, ±5%
R325, R326	07-23900-51	390R, 1/4W, ±1%
R331, R332	07-23900-50	390R, 1/6W, ±1%
R139, R239	07-24120-51	412R, 1/4W, ±1%
R383, R384, R391, R392	07-25600-50	560R, 1/6W, ±1%
R323, R324	07-27500-51	750R, 1/4W, ±1%
R329, R330	07-21501-50	1K5, 1/6W, ±1%
R412	07-20202-51	2K, 1/4W, ±5%
R414	07-20222-51	2K2, 1/4W, ±5%
R321, R322	07-20332-51	3K3, 1/4W, ±5%
R363, R364	07-20513-50	51K, 1/6W, ±5%
R389, R390	07-20106-50	10M, 1/6W, ±5%
R150, R250	07-30109-01	1R, 1W, ±5%
R124, R125, R224, R225	07-30339-00	3R3, 1/2W, ±5%
R427	07-30220-01	22Ω, 1W ±5%
R452, R453	07-30221-03	220Ω/2W 5%
R128, R129, R228, R229	07-30331-00	330R, 1/2W, ±5%
R146, R246	07-30182-02	1K8, 2W, FP, ±5%
R126, R127, R132, R133 R226, R227, R232, R233	07-30332-12	3K3, 2W, FP, ±5%
R136, R137, R236, R237	07-50100-10	10Ω, 1/4W, ±5%
R151, R251	07-50100-01	10R, 1W, FS, ±5%
R45, R46	07-50330-00	33R, 1/2W, ±5%, FS
R130, R131, R230, R231	07-50820-02	82R, 1W, FS, ±5%
R443	07-50151-00	150R, 1/2W, ±5%
R144, R145, R244, R245	07-40687-03	0.068R, 3W, CE, ±5%
	INDUCTORS	
L11, L21	08-01005-00	0.5uH
	POTS	

VR301, VR302	09-02101-00	100R
VR12, VR22	09-02201-02	200R
VR3	09-02103-00	10K
VR304, VR303	09-02303-00	30K
RT31, RT32	09-01103-01	RK163121A2CA 10KAx2
RT33	09-01203-01	RK16812MG 20KBx2
RT34	09-01203-03	RK163121A10D 20KMN
	SWITCHS	
S41	11-05202-02	SK-22F03G7
SW31	11-02202-02	SPUN190700
	RELAYS	
RL31, RL32, RL33, RL34, RL35, RL36, RL37, RL38,RL39	12-02101-02	JRC-27F/012/S
RL12/1	12-01101-02	F1AA012V
	CONNECTERS	
MAIN BOARD--CB58	14-32501-00	VH 3.96A-2Y plug, 16AWG, UL1015#,black,130mm length.
MAIN BOARD--CB52 CB54	14-32502-00	VH 3.96A-2Y plug, 16AWG, UL1015# red and white,130mm length.
R-OUT	14-32502-01	UL 2468 , 16AWG, blue and white. 155mm length.
L-OUT	14-32502-02	UL 2468 ， 16AWG， blue and red 。100mm length
TP1, TP2, TP3, TP4, TP10, TP11	13-10001-00	Test-1®
CB35	13-22503-00	XHB2.5A-3A
CB45	13-22505-00	XHB2.5A-5A
CB47	13-22507-00	XHB2.5A-7A
CB34	13-22509-00	XHB2.5A-9A
CB31	13-22510-00	XHB2.5A-10A
RCA31,RCA32,RCA34	17-01004-00	4 holes red and white, gilt
RCA33	17-01006-00	6 holes red and white, gilt
PHONE2	17-02001-04	ST-323B-04 CKK-3.5-02-3P
PHONE1	17-02002-00	PHONEJACK2
Binding Post Assy	02-03001-20	C VERSION
Binding Post Assy	02-03001-10	AH VERSION
Binding Post(Red)	17-03002-01	C VERSION
Binding Post(Red)	17-03002-11	AH VERSION
Binding Post(Red)	73-001003-0	HS4-C320-B009V1-P003
BDP CAP(Red)	73-001005-0	HS4-C320-B009V1-P007
Shaft	69-001001-0	HS4-C320-B009V1-M024
Binding Post	69-001002-0	HS4-C320-B009V1-M025
Binding Post(Black)	17-03002-02	C VERSION
Binding Post(Black)	17-03002-12	AH VERSION
Binding Post(Black)	73-001004-0	HS4-C320-B009V1-P004
BDP Cap(Black)	73-001006-0	HS4-C320-B009V1-P008
Shaft	69-001001-0	HS4-C320-B009V1-M024
Binding Post	69-001002-0	HS4-C320-B009V1-M025
BDP SUPPORT	66-001006-1	HS4-C320-B009V1-M015 B
BDP PIN	69-001010-0	HS4-C320-B009V1-M017
	LINKS	

J3, J7, J28, J29, J38, J42, J46, J49, J50, J56, J57, J58, J59, J65, J88, J93, J94, J95, 101, J102, J105, J106, J107, J108, J110, J119, J120, J121, J126, J127, J128, J129, J130, J131, J135, J138, J139, J140, J141, J150, J151, J152, J154, J155, J159, J160, J161, J162, J163, J172, J174, J175, J176, J183, J184, J186, J187, J197, J198, J199, J200, J205	21-06000-00	L=5mm
J9, J10, J11, J13, J25, J26, J32, J35, J36, J37, J39, J40, J41, J44, J45, J47, J48, J53, J62, J63, J64, J67, J73, J99, J100, J104, J117, J125, J143, J146, J147, J164, J165, J166, J168, J169, J170, J173, J185, J192, J202, J203, J204, J207	21-06000-00	L=7.5mm
J4, J43, J51, J52, J66, J87, J89, J90, J91, J96, J111, J113, J118, J122, J171, J179, J180, J190, J201	21-06000-00	L=10mm
J12, J27, J61, J68, J69, J72, J116, J123, J124, J133, J134, J136, J137, J142, J145, J149, J156, J157, J158, J178, J191	21-06000-00	L=12.5mm
J30, J31, J54, J55, J80, J132, J181, J182, J188, J189, J193	21-06000-00	L=15mm
J8, J14, J15, J16, J17, J18, J19, J20, J21, J33, J34, J60, J76, J82, J112, J206	21-06000-00	L=18mm
J22, J23, J24, J75, J81, J83, J92, J97, J98, J103, J109, J144, J153, J195, J196	21-06000-00	L=20mm
J74, J114, J115	21-06000-00	L=22.5mm
J70, J71, J77, J78, J84, J85, J86, J177	21-06000-00	L=25mm
J2, J5	21-10750-00	L=7.5 (thick links)
J79	21-10101-00	L=10 (thick links)
J167	21-10201-00	L=20 (thick links)
J1, J6, J148	21-10251-00	L=25 (thick links)
PCB-6:OUT MODULE ; PCB-7: IN MODULE	**Line Out: 01-32560-02 and Line In: 01-32560-01**	
CIRCUIT NO.	**PART NO.**	**DESCRIPTIONS**
	TRANSISTORS	
Q61, Q62	31-00170-00	2SK170
Q63, Q65	31-00970-00	2SA970
Q64, Q66	31-00647-00	2SB647A
Q67, Q68	31-00667-00	2SD667A
	DIODES	
D61, D62, D63, D64	33-44148-00	1N4148
	CAPACITORS	
C63, C64,	05-22012-01	22p, 100V, ±10%
C611(IN MODULE)	05-43012-01	43p, 100V, ±10%
C611(OUT MODULE)	05-75012-00	75p, 100V, ±10%
C69, C610	05-10151-00	100p, 50V, ±10%
C61, C62	05-22151-00	220p, 50V, ±20%

C65, C66, C67, C68	24-10461-00	0.1uF, 63V, ±20%
	RESISTORS	
R617, R618, R619, R620	07-20100-50	10Ω, 1/6W, ±5%
R615, R616	07-20330-50	33Ω, 1/6W, ±5%
R61, R62	07-20221-50	220Ω, 1/6W, ±5%
R69, R610	07-24300-50	430Ω, 1/6W, ±1%
R67, R68, R611, R612	07-20102-50	1KΩ, 1/6W, ±5%
R613, R614	07-20103-50	10KΩ, 1/6W, ±5%
R621	07-20303-51	30KΩ, 1/4W, ±5%
R63, R64	07-20105-50	1MΩ, 1/6W, ±5%
	CONNECTER	
S006	13-12509-01	CZ61
J61	21-06000-00	L=5
PCB-4: AMP MODULE L SMD 01-32520-01		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	TRANSISTORS	
Q26	31-01015-01	2SA1015
Q27	31-01815-01	2SC1815
Q22, Q25, R202, Q204	31-01312-00	2SA1312-GR
Q23, Q24, Q201, Q203	31-03324-00	2SC3324-GR
Q28	31-00647-00	2SB647A
Q29	31-00667-00	2SD667A
	DIODES	
D23, D24, D25, D26	33-44148-11	LL4148
	RESISTORS	
R254, R255	07-90100-01	10Ω, ±5%
R215, R216	07-91509-01	15Ω, ±1%
R249	07-96809-01	68Ω, ±1%
R203, R206, R219, R220	07-98209-01	82Ω, ±1%
R211, R212, R259	07-91000-01	100Ω, ±1%
R269	07-93300-01	330Ω, ±1%
R29, R201, R205, R210	07-93902-01	39KΩ, ±1%
R223	07-94702-01	47KΩ, ±1%
R221, R222	07-91003-01	100KΩ, ±1%
R202, R204	07-92203-01	220KΩ, ±1%
	CAPACITORS	
C28, C29	26-39051-01	39pF, 50V, ±5%
C22, C224	26-10251-11	1nF, 50V, ±5%
C23, C24	06-10031-02	VSS, 10uF, 35V, ±20%
C203, C204	06-22011-05	VSS, 22uF, 16V, ±20%
	INDUCTORS	
L22	08-04101-00	100uH
	CONNECTER	
S006	13-12508-11	CZ21
PCB-5: AMP MODULE R SMD 01-32520-02		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	TRANSISTORS	
Q16	31-01015-01	2SA1015
Q17	31-01815-01	2SC1815
Q12, Q15, Q102, Q104	31-01312-00	2SA1312-GR
Q13, Q14, Q101, Q103	31-03324-00	2SC3324-GR
Q18	31-00647-00	2SB647A
Q19	31-00667-00	2SD667A
	DIODES	
D13, D14, D15, D16	33-44148-11	LL4148
	RESISTORS	
R154, R155	07-90100-01	10Ω, ±5%
R115, R116	07-91509-01	15Ω, ±1%
R149	07-96809-01	68Ω, ±1%
R103, R106, R119, R120	07-98209-01	82Ω, ±1%
R111, R112, R159	07-91000-01	100Ω, ±1%

R169	07-93300-01	330Ω, ±1%
R19, R101, R105, R110	07-93902-01	39KΩ, ±1%
R123	07-94702-01	47KΩ, ±1%
R121, R122	07-91003-01	100KΩ, ±1%
R102, R104	07-92203-01	220KΩ, ±1%
	CAPACITORS	
C18, C19	26-39051-01	39pF, 50V, ±5%
C12, C124	26-10251-11	1nF, 50V, ±5%
C13, C14	06-10031-02	VSS, 10uF, 35V, ±20%
C103, C104	06-22011-05	VSS, 22uF, 16V, ±20%
	INDUCTORS	
L12	08-04101-00	100uH
	CONNECTER	
CZ11	13-12508-11	S006
PCB-8: STANDBY BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	DIODES	
D717	33-50525-00	Φ5 DUAL COLOR
	SWITCHS	
S78	11-04101-10	DTSG（P）-24N
	CONNECTER	
CB73———CZ73	14-32505-10	26AWG UL2468# white, 70mm length
PCB-2: POWER BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	TRANSISTORS	
Q59, Q510, Q517, Q519	31-01015-00	2SA1015 GR
Q518, Q520	31-01815-00	2SC1815 GR
	DIODES	
D513	33-24004-02	1N4004
	33-24004-00	1N4004
D56 ⚠	33-30142-00	DB104
D51, D55 ⚠	33-30822-00	8A/200V
D531, D532	33-60116-00	TIC116D/BT151-500R
	CAPACITORS	
C54 ⚠	25-47422-00	MKP62, 275V, 0.47uF 10% MPX 275VAC 0.47uF 10%
C53 ⚠	05-47242-00	4n7p, 400V, ±20%
	78-001001-0	811810-23
C51, C52	25-10322-00	10n/250V 10%
C524	06-22251-00	2200u/50V 20%
C523	06-33251-00	3300u/50V 20%
C517, C518	06-15351-01	15000u/50V 10%, two foods
C517, C518	06-15351-02	15000u/50V 10%, two fods
	RESISTORS	
R561, R565	07-10101-51	100Ω, ±5%, 1/4W
R532	07-10221-51	220Ω, ±5%, 1/4W
R558, R559, R560, R562	07-10102-51	1KΩ, ±5%, 1/4W
R534	07-10222-51	2.2KΩ, ±5%, 1/4W
R566	07-10472-51	4.7KΩ, ±5%, 1/4W
R544, R563, R564	07-10223-51	22KΩ, ±5%, 1/4W
R567	07-10334-51	330KΩ, ±5%, 1/4W
R533	07-10105-51	1MΩ, ±5%, 1/4W
R531	07-40507-03	0.05Ω, 3W, ±5%
	FUSES	
F51, F52, F53, F54 ⚠	20-12632-00	T6.3AL250V
F55	20-12501-00	T500mAL/250V
F51, F52, F53, F54 ⚠	20-20000-00	HF-004
	CONNECTERS	
CB52, CB54, CB58	13-23902-00	VH 3.96A-2A
CB55, CB56, CB59 ⚠	13-23903-01	VH 3.96A-3A(delete the center needle)
CB57 ⚠	13-23903-11	VH 3.96A-3A(delete the center needle)
CB51	13-23907-10	VH 3.96A-7A

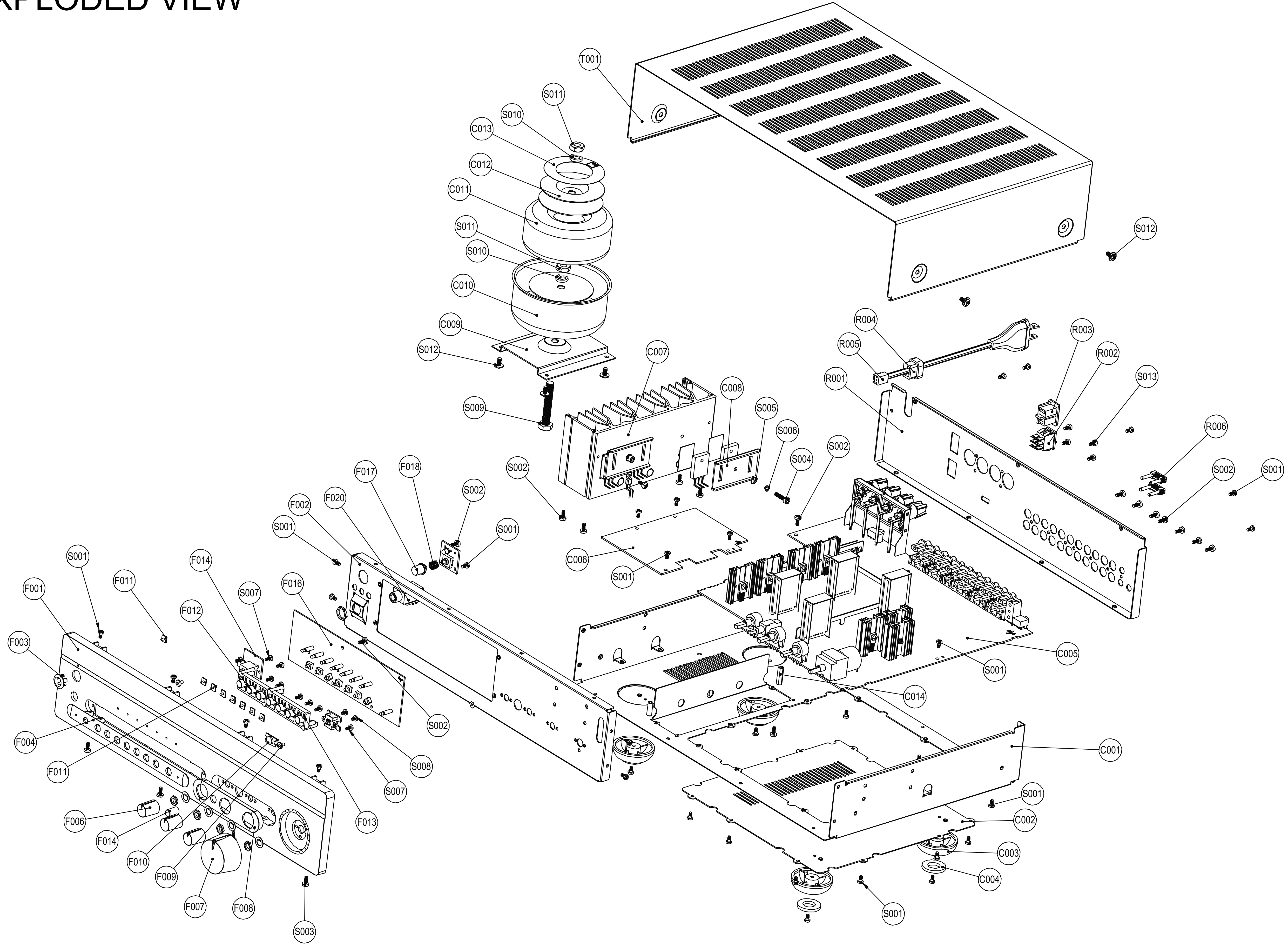
CB53——CB47	14-32507-10	SCN 2.5A-7D needles,XHB 2.5A-7Y plug. 26AWG UL2468# white, 230mm length
	LINKS	
J52, J57, J513, J517	21-06000-00	L=5
J516, J520	21-06000-00	L=7.5
J51	21-06000-00	L=10
J514	21-10101-00	L=10
J54, J58, J518	21-06000-00	L=12.5
J510	21-06000-00	L=15
J56	21-10151-00	L=15
J515	21-06000-00	L=18
J519	21-10201-00	L=20
J512	21-06000-00	L=25
PCB-3: KEY BOARD		
CIRCUIT NO.	**PARTS NO**	**DESCRIPTION**
	ICS	
IC71	03-02402-00	24C01A/24C02(A)/24C04(A)
IC74, IC75	03-04094-00	CD4094/HEF4094
IC73	03-04051-22	AT89C4051-12PU
IC73	03-04051-12	AT89C4051-12PU
IC76	03-00810-02	TCM810MENB
	TRANSISTORS	
Q72, Q73, Q74, Q79, Q710, Q711, Q712, Q713, Q714, Q715, Q716, Q717, Q718	31-01815-00	2SC1815
	DIODES	
D710, D711, D712, D713, D714, D715	33-44148-00	1N4148
D718	33-44148-00	1N4148
D71 ,D72, D73, D74, D76, D77, D716	33-50350-00	φ3 GREEN LED
D75	33-50340-00	φ3 AMBER LED
	CRYSTAL	
Y71	04-11102-00	11.0592MHz, CL=15pF
	CAPACITORS	
C79, C710	05-27051-00	27p, 50V, ±10%
C724, C725		N.I.
C77, C714, C715, C716, C717, C718, C719, C720, C721	24-10312-00	10nF, 100V, ±20%
C72, C78, C711, C712	24-10461-00	100nF, 63V, ±20%
C722		N.I.
C71, C723	06-10111-00	100uF, 16V, ±20%
	RESISTORS	
R71	07-10331-50	330Ω, 1/6W, ±5%
R72	07-10471-50	470Ω, 1/6W, ±5%
R701, R703, R725, R759	07-10222-50	2K2Ω, 1/6W, ±5%
R726, R727	07-10222-51	2K2Ω, 1/4W, ±5%
R748, R749, R750, R751, R752, R754, R760, R766	07-10472-50	4K7Ω, 1/6W, ±5%
R741, R742, R743, R744, R745, R746, R747, R753, R761	07-10472-51	4K7Ω, 1/4W, ±5%
R733	07-10512-51	5K1Ω, 1/4W, ±5%
R702, R73, R756, R757, R758, R762, R763, R764	07-10103-50	10KΩ, 1/6W, ±5%
R708	07-10103-51	10KΩ, 1/4W, ±5%
R730	07-10153-50	15KΩ, 1/6W, ±5%
	SWITCHS	
S71, S72, S73, S74, S75, S76, S77	11-04101-00	IT-1102D-1160
	CONNECTERS	

CZ71--CB34	14-32509-00	SCN 2.5A-9D needle,XHB 2.5A-9Y plug. 26AWG UL2468#, white , 400mm length
CZ72--CB31	14-32510-00	SCN 2.5A-10D needle,XHB 2.5A-10Y plug. 26AWG UL2468#, white , 430mm length
	LINKS	
J71, J72, J73, J74, J75, J79, J710, J716, J733, J735, J745, J746, J747, J749, J753, J794	21-06000-00	L=5
J76, J77, J78, J715, J717, J718, J727, J738, J740, J742, J744, J752, J793	21-06000-00	L=7.5
J713, J720, J729, J734, J737, J743, J750	21-06000-00	L=10
J711, J719, J726, J728, J730, J731, J732, J776, J792	21-06000-00	L=12.5
J712, J724, J739	21-06000-00	L=15
J714, J748	21-06000-00	L=18
J721, J722, J723, J725, J736, J741	21-06000-00	L=20
PCB-9: IPOD BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	DIODES	
D719	33-50350-00	φ3 GREEN LED
	CAPACITORS	
C758, C759	05-10151-01	100p, 50V, ±10%
C760	24-10461-00	0.1uF, 63V, ±20%
	RESISTORS	
R766	07-10100-50	10Ω, 1/6W, ±5%
	CONNECTER	
PHONE71	17-02001-02	SCJ340R0GBS0B00
TP701--front panel	14-32501-12	1007#, 24AWG, black, 35mm length
CZ75——CB35	14-32503-11	SCN 2.5A-3D needles,XHB 2.5A-3Y plug。UL1691, 24AWG/26AWG, white/red/black, 675mm length.
CB74——CZ74	14-32504-10	SCN 2.5A-4D needles. 26AWG UL2468# ,red/white, 70mm length.
PCB-10: HEADPHONE BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	RESISTORS	
R454, R455	07-30101-04	100Ω 2W ±5%
	CONNECTER	
CZ45--CB45	14-32505-01	XHB 2.5A-5Y plug,26AWG UL2468# white, 410mm length
CZ45	13-22505-00	XHB2.5A-5A
	LINKS	
J41	21-06000-00	L=5mm
PCB-11: IR BOARD		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	ICS	
IC72	03-00038-40	HS0038B4
	CONNECTER	
CZ72--CB72	14-32503-10	SCN 2.5A-3D needles；26AWG UL2468# ,red/white，60mm length
OTHERS		
CIRCUIT NO.	**PART NO.**	**DESCRIPTION**
	TRANSFORMER	
C VERSION	⚠ 18-32515-20	TD-230-0150G
AH VERSION	⚠ 18-32515-10	TD-120-0150G
	METAL PARTS	
Busbar	69-065001-0	T2Y2 T=1mm
Heatsink (SMALL1)	70-065001-0	ALU 6063 BLACK

Heatsink (SMALL2)		70-065002-0	ALU 6063 BLACK
Machine Screw		61-022510-5	MB2.5×10
Machine Screw		61-022514-5	MB2.5×14
Nut		62-010202-5	M2.5
RIVET		61-382003-5	GB975-86-2.5×3
		CONNECTERS	
14-32502-23	⚠	VH 3.96A-3Y(delete center needle) plug. 18AWG UL1672#, red/blue,180mm length.	CB59——AC OUTLET(AH)
14-32502-33	⚠	VH3.96A-3Y(delete center needle) plug,18AWG UL1672# . red/blue,160mm length.	CB56——POWER SWTICH
15-02251-20	⚠	WB01HS-001	AC CORD（C）
15-10121-10	⚠	WB05HS-001	AC CORD（AH）
15-02251-30	⚠	2GTJ1	AC CORD（CCC）
17-07002-10	⚠	JY0647A	AC Outlets(AH)
11-01101-03	⚠	RF-1003-BB2, 10A 250V, TV-5	SW52

NOTES:	AH	C
TRANSFORMER	TD-120-0150L	TD-230-0150C
AC CORE	WB05HS-001	WB01HS-001

EXPLODED VIEW

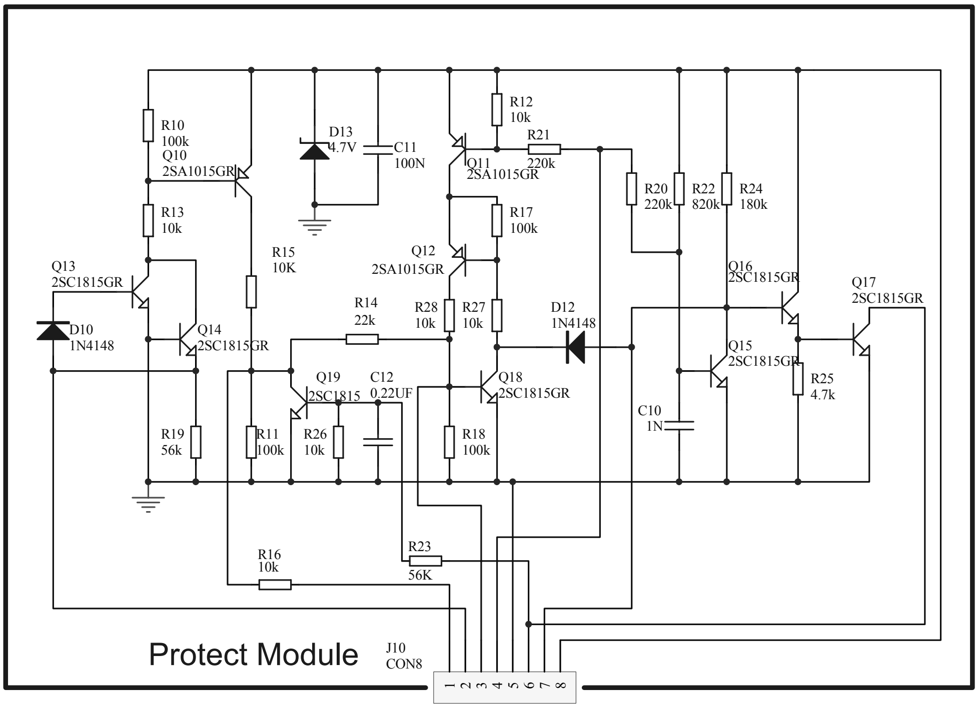


EXPLODED VIEW PARTS LIST

REF.NO	PART NO.	DESCRIPTION	Qty.
C001	66-065001-0	Chassis	1
C002	66-001004-1	Base Cover	1
C003	75-010004-0	Foot	4
C004	78-001002-0	Foot Pad	4
C005	01-32501-10	Main Board Assy(AH)	1
	01-32501-20	Main Board Assy(C)	1
C006	01-32505-10	Power PCB (AH)	1
	01-32505-20	Power PCB (C)	1
C007	70-065003-0	Heatsink	1
C008	66-001009-0	Clamper	1
C009	66-001010-0	Transformer Bracket	1
C010	67-003006-0	Shielding Box	1
C011 ⚠	18-32515-10	Transformer(AH)	1
⚠	18-32515-20	Transformer(C)	1
C012	66-001008-0	Metal Disc	1
C013	94-001004-2	Transformer Label	1
C014	75-065001-0	PCB Spacer	1
F001	77-065002-0	Fascia	1
F002	66-065002-0	Subfascia	1
F003	77-001007-1	Power Button Bezel	1
F004	77-065001-0	Input Button Lozenge	1
F005	74-001001-1	Tone Button	1
F006	73-014001-1	Tone Knob	3
F007	73-014002-1	Volume Knob	1
F008	77-001001-1	Tone Control Lozenge	1
F009	76-003001-0	LED Lens	2
F010	76-001001-0	IR Lens	1
F011	76-001002-0	LED Lens	8
F012	74-047001-0	Trio Buttons	1
F013	74-001008-0	Quad Buttons	1
F014	01-32509-00	IPOD BOARD PCB	1
F015	01-32507-00	IR BOARD ASSY	1

REF.NO	PART NO.	DESCRIPTION	Qty.
F016	01-32503-00	KEY BOARD ASSY	1
F017	74-065001-0	Power Button	1
F018	92-048001-0	Spring For Button	1
F019	01-32508-00	Standby Board Assy	1
F020	01-32504-00	Phone Board Assy	1
R001	67-065001-0	Rear Panel（AH）	1
	67-065002-0	Rear Panel（C）	1
R002 ⚠	11-01101-03	Rocker Switch	1
R003 ⚠	17-07002-10	AC Outlet（AH）	1
R004	84-001002-0	Relief Bushing	1
R005 ⚠	15-02251-20	AC CORD（C）	1
⚠	15-10121-10	AC CORD（AH）	1
R006	30-63200-00	Shorting Plug	2
T001	67-065004-0	Top cover	1
S001	61-023106-0	Self Taping Screw STB3X6	38
S002	61-023208-0	Self Taping Screw BTB3X8	21
S003	61-023108-0	Self Taping Screw STB3X8	4
S004	61-224516-0	Machine screw HM4×16	2
S005	63-010410-0	Plain Washer ∮4	2
S006	63-020411-0	Spring Washer ∮4	2
S007	61-022206-6	Self Taping Screw BTB2.6X6	13
S008	61-022204-6	Self Taping Screw BTB2.6×4	2
S009	64-108050-0	Bolt M8×50	1
S010	63-020820-0	Spring Washer ∮8	2
S011	62-010802-0	Nut M8	2
S012	61-084108-0	Self Taping Screw STPW4×8	2
S013	61-023206-0	Self Taping Screw BTB3X6	4

PROTECT IC CHANGE



This Protect Module replaces Protection IC 44

Remove part below:
R442 Remove 56K Ohm resistor

Replace and change orientation the part below:
C421 From 4.7uF/50V to 0.47uF/50V.
Reverse mount the new C421.

Change orientation for the part below:
D513 Reverse mount the 1N4004

SERVICE MANUAL

C 325BEE

STEREO AMPLIFIER

NAD ELECTRONICS LTD
TORONTO